JPRS 81814

22 September 1982

USSR Report

AGRICULTURE

No. 1350

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LIVESTOCK

AGRO-ECONOMICS AND ORGANIZATION

MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

HARVESTING OF PEAS--The machine operators in Belgorodskaya Oblast have commenced harvesting their peas. This crop occupies 80,000 hectares, twice as much as last year. Future plans call for this area to be expanded even more, thus providing the farms with an excellent predecessor crop for winter wheat. In addition, the farms will be able to augment their feed base for public livestock production with high quality protein. At the Kolkhozes imeni Frunze in Belgorodskiy Rayon, imeni Il'ich in Krasnogvardeyskiy Rayon and imeni Lenin in Rakityanskiy Rayons and others, 12-15 percent of the arable land has already been set aside at the present time for peas. Special attention is being given to the best regionalized and promising varieties--Uladovskiy Yubileynyy and Neosypayushshiysya Voroshilovgradskiy. /by N. Ryapolov/ /Text/ /Moscow SOVETSKAYA ROSSIYA in Russian 25 Jun 82 p 1/ 7026

MOWING AND THRESHING--Belgorod, 24 Jul--The harvesting of crops has commenced in all rayons of the oblast. More than 10,000 combines and harvesters have been moved out onto the fields. By employing the Ipatovo method, many machine operators have been achieving a high level of labor productivity and good quality work since the first days of the harvest season. In Shebekinskiy Rayon, for example, A.K. Vinogradov of the 40 Let Oktyabrya Kolkhoz and V.A. Shchegol'tsov of the Leninskiy Put' Kolkhoz are over-fulfilling their output norms for the mowing of winter wheat by more than twofold. The picking up of windrows and the sale of grain to the state have commenced. /Text/ /Moscow SEL'SKAYA ZHIZN' 25 Jul 82 p 1/ 7026

RECORD YIELDS--Belgorod, 31 Jul--The tempo of the harvest operations during this jubilee year is increasing with each passing year. The prevailing weather is making it possible for the grain growers to achieve high results in the mowing and threshing of their grain crops. The initiators of the oblast competition for high quality harvesting of the crops, the combine operators in Shebekinskiy Rayon, were the first to achieve the 1,000 quintal mark. The flag of labor glory has been raised in the center of Shebekino in honor of the leading combine operators. The rayon's grain growers have commenced standing a shock watch in honor of the 39th anniversary of the liberation of Belgorod and the oblast from the fascist aggressors. Prior to this notable data--5 August--they intend to complete their grain threshing work. /by V. Chesnokov/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 1 Aug 82 p 1/ 7026

FALLOW PREPARATION--Kaluga, 15 Jun--This year, many farms throughout the oblast have set aside considerable areas to be used as clean fallow. The farms in Borovskiy, Duminichskiy, Kirovskiy and other rayons have fulfilled their task for plowing up

the fallow. The machine operators are presently applying organic and mineral fertilizers and lime to this fallow land. /by A. Glazkov/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 16 Jun 82 p 1/ 7026

HIGH RESULTS--Tula, 30 Jul--The 1982 harvest at kolkhozes and sovkhozes in Tul'skaya Oblast commenced with the first sheaf. The plans call for grain crops to be harvested from almost 1 million hectares of fields throughout the oblast. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 31 Jul 82 p 1/ 7026

QUALITY INSPECTION OF CROPS--Yoshkar-Ola, 28 Jun--Just as in previous years, an inspection of the quality of the grain and pulse crops has been carried out in the autonomous republic. The badge of quality has been conferred upon 232 fields. Included among them are the green tracts of grain crops in Medvedevskiy, Zvenigovskiy, Paran'ginskiy, Mari-Turekskiy and other rayons. At the present time, the machine operators are continuing to tend the crops as they actively prepare to carry out their harvest operations. /by P. Toyshev/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 29 Jun 82 p 1/ 7026

PEAS, RYE MOWING IN PROGRESS--Cherboksary, 3 Aug--To obtain 22 quintals of grain from each hectare--such is the obligation of the farmers in the Chuvashskaya ASSR. The first to commence harvesting their crops in the republic were the machine operators in Batyrevskiy, Yal'chikskiy and Shemurshinskiy Rayons, where the mowing of peas and rye is in progress. The harvesting teams at the Batyrevskiy Sovkhoz, headed by the experienced machine operators V. Paukin and N. Zaynetdinov, have been working day and night. /by L. Alekseyev/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 4 Aug 82 p 1/ 7026

BRIGADE CONTRACTS EMPLOYED--Penzenskaya Oblast--The busy harvest season has commenced in Penzenskaya Oblast. The farms in Neverkinskiy, Kameshkirskiy and Lopatinskiy Rayons were the first to commence threshing their grain crops. The picking up of windrows is being carried out by large harvesting complexes. In order to ensure the continuous operation of the field - threshing floor - elevator production line, the transport collectives at many kolkhozes and sovkhozes are making extensive use of the brigade contract method for the period of the harvest operations. According to estimates by specialists, the introduction of this method will make it possible to reduce by twofold the number of motor vehicles engaged in servicing the combines. /by M. Sharov/ /Text/ /Moscow SOVETSKAYA ROSSIYA in Russian 28 Jun 82 p 1/ 7026

PREPARATION OF FALLOW--Kalinin, 12 Jun--To prepare all of the clean fallow areas during the first half of June -- such is the task undertaken by the oblast's machine operators. In all, there are more than 100,000 hectares of such fallow. During the summer this land will be maintained in a clean and loose state, with organic and mineral fertilizers being applied to it. More than 2 million tons of peat and farmyard manure alone will be applied. Lime will be applied to 75,000 hectares of acid soil. The work out on the fallow fields and hence the campaign in behalf of next year's harvest is being carried out best on the farms in Krasnokholmskiy, Kesovogorskiy, Lesnyy and Sonkovskiy Rayons. Together with the kolkhoz and sovkhoz grain growers, the machine operators of many rayon associations of Sel'khozkhimiya are participating in the work of tending the fallow. /by D. Prosekov/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 13 Jun 82 p 1/ 7026

IMPROVING SOIL FERTILITY--Penza, 7 Jun--The farms in Penzenskaya Oblast are presently carrying out a 2 month period of shock work concerned with the transporting and applying to the soil of farmyard manure and peat-manure composts. The plans call for no less than 5 million tons of organic materials to be delivered to the fields during this period. /by A. Andreyev/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 8 Jun 82 p 1/ 7026

PREPARED FOR HARVEST--Penzenskaya Oblast--The kolkhozes and sovkhozes in Issinskiy, Kuznetskiy, Kamenskiy, Lopatinskiy, Belnodem'yanovskiy and a number of other rayons are fully prepared to move out onto the grain fields. During the crop harvesting period, 810 harvesting-transport complexes will be in operation throughout the oblast, each of which will include party and party-komsomol groups. /by M. Sharov/ /Text/ /Moscow SOVETSKAYA ROSSIYA in Russian 24 Jul 82 p 1/ 7026

MASS MOWING OF GRAINS--Ryazan', 3 Aug--The kolkhozes and sovkhozes in Ryazanskaya Oblast have commenced the mass mowing of their grain crops. The grain growers are striving to harvest their crops rapidly and without losses, to fulfill their obligations for selling grain to the state and to place in storage no less than 800,000 tons. Many machine operators are following the example set by leading workers. Approximately 600 harvesting-transport complexes have been formed on farms throughout the oblast. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 4 Aug 82 p 1/ 7026

HARVESTING-TRANSPORT COMPLEXES--Elista, 2 Jul--"Not one moment of equipment idle time" such is the slogan of the farmers in the Kalmykskaya ASSR, who have commenced their mass harvesting of grain crops. More than 250 enlarged harvesting transport complexes have joined harmoniously in the work being carried out on the grain fields, which occupy an area of almost one half million hectares. They are all staffed with machine operators for double shift operations. The grain growers have resolved to harvest their crops in a rapid manner -- within 12-14 days. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 3 Jul 82 p 1/ 7026

KUYBYSHEVSKAYA OBLAST GRAIN HARVEST--Kuybyshev, 19 Jul--The farmers in Kuybyshevskaya Oblast have commenced harvesting their grain crops. Hot dry weather has accelerated the ripening of the grains and forced corrections in the stracegy being employed by the farmers. The harvesting-transport teams in all areas are cutting down their grain crops using the flow line technology of the workers in Ipatovskiy Rayon. The initial thousands of hectares of grain crops have been cut down. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 20 Jul 82 p 1/ 7026

A HIGH OUTPUT--Orenburg, 16 Jul--The kolkhozes and sovkhozes in Orenburgskaya Oblast have commenced their busy harvest season. The workers in Ilekskiy, Sol'-Iletskiy, Akbulakskiy and some other rayons were the first to more their harvesting units out onto the fields. Shortly before this, a meeting was convened for the best combine operators, leaders of harvesting-transport teams and complexes, motor vehicle drivers and workers attached to grain procurement points. The leading collectives called upon all of the machine operators to achieve a daily output for their ZhVN-6 harvesters of up to 45 hectares and in the case of direct combining -- up to 16 hectares. The appeal of the leaders found support. For example, combine operators at the Ilekskiy Za Mir Kolkhoz Ye. Baryshnikov and A. Alimov and many other machine operators are mowing 50-65 hectares daily. /by I. Gavrilenko/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 17 Jul 82 p 1/ 7026

GRAIN HARVEST COMMENCES--The harvesting of grain crops has commenced on the fields in Orenburgskaya Oblast. The farms in Ilekskiy, Sol'-Iletskiy and Orenburgskiy Rayons were the first to commence this work. The agronomists and machine operators defined the harvest tactics for each field and the harvesting work is being carried out using the two-stage method and also direct combining. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 17 Jul 82 p 1/ 7026

HARVEST TEMPO INCREASING--Kuybyshevskaya Oblast--The tempo of the busy harvest season in the central Volga region is increasing with each hour. The mowing and threshing of grain crops have commenced in the northern rayons of Kuybyshevskaya Oblast. On many farms the harvest work is being carried out on the basis of a consolidated work schedule, using large mechanized detachments -- as the tracts ripen. /by A. Bochkarev/ /Text/ /Moscow SOVETSKAYA ROSSIYA in Russian 28 Jun 82 p 1/ 7026

HERBICIDE TREATMENTS--Chita, 22 Jun--The aircraft of agricultural aviation are applying herbicides to the crops in Nerchinskiy and also in Chernyshevskiy, Sretenskiy, Borzinskiy and Priargunskiy Rayons. More than 50,000 hectares of grain crops have been so treated. At a number of kolkhozes and sovkhozes in Baleyskiy and Karymskiy Rayons the grain growers have skilfully organized weed control work using ground equipment. Specialized detachments of Sel'khozkhimiya have moved out onto the fields on a majority of the farms. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 23 Jun 82 p 1/ 7026

ACTIVE ASSISTANCE--Khabarovsk--The far east aviators are providing the farmers with active assistance in combating weeds. /Text/ /Moscow TRUD in Russian 11 Jun 82 p 1/ 7026

THRESHING OF WINDROWS--Birobidzhan, 19 Jul--The harvesting of grain crops has commenced on the fields in the Yevreyskaya AO. The farms in Oktyabr'skiy and Leninskiy Rayon were the first to join in this work. At the Pogranichnyy and Oktyabr'skiy Sovkhozes and also at the recently organized Puzinovskiy Sovkhoz, the machine operators have vowed to complete their crop harvesting work in not more than 100 working days. It is being carried out by complex detachments and this is making it possible to maneuver the equipment and to provide better servicing of the units. The farmers have cut down their barley on the initial thousands of hectares. The threshing of the windrows has commenced. /by Yu. Baklanov/ /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 20 Jul 82 p 1/

COMBATING GRAIN LOSSES--Kurskaya Oblast--The wheat fields stretch out for a great distance. Strong winds have beat to the ground the dense stalks crowned with larg ears. The chairman of the Kolkhoz imeni Michurin in Oboyanskiy Rayon, V.D. Shakhov, opens up one of them and counts the number of grains. "Forty quintals per hectare will be obtained" he states. Thereafter the chairman directs attention to the large tracts which were downed by the wind and discusses how the farm plans to harvest the lodged grain crops. All three of the harvesters have been equipped with lifters. The chairman is also concerned regarding the spring grain crops. The barley does not stand very tall and thus the pick-up attachments require very careful adjustments. The experience of past years has shown that even ears which have fallen down upon the stubble can be picked up if the ends of the rakes are turned downwards. Everything is being done to reduce the harvesting periods to a minimum and to prevent losses. But a great amount of work still remains to be carried out. The work of preparing the equipment has fallen behind in Ponyrovskiy,

Khomutovskiy, Pristenskiy and other rayons. And a portion of the combines on farms in Manturovskiy Rayon have been returned to raysel'khoztekhnika for repeated repairs. The level of preparation of the motor transport vehicles is causing some alarm. By the end of June, one fourth of the trucks were still in a state of disrepair. The chronic shortage of spare parts and shortcomings in the work being performed by Goskomsel'khoztekhnika enterprises are also taking their toll. At the remzavod /repair plant/ in Ryl'sk, for example, the volume of motor vehicle repair work has decreased in recent years, while at the same time an increase has taken place in the amount of "profitable" outside work. The lowest level of preparation of a motor vehicle pool exists in Fatezhskiy Rayon, despite the fact that a station for the technical servicing of motor vehicles is in operation here. In the complex of measures aimed at combating losses, everything is important. Correct action is being taken on those farms where committees have been established for determining the schedules for commencing the mowing work and carrying out controlled threshings, where the method for preparing the headlands has been defined, where the fields have been broken down into plots and where tractor rakes have been made available for harvesting the ears left behind following the threshing. The Kursk farms must eliminate in a timely manner the shortcomings noted in the preparations for the mass harvesting operations and they must undertake all of the measures required for ensuring rapid harvesting of the crops without losses. /by A. Trubnikov/ /Excerpts/ /Moscow SEL'SKAYA ZHIZN' in Russian 4 Jul 82 p 1/ 7026

CSO: 1824/472

POST HARVEST CROP PROCESSING

FRUIT, VEGETABLE SUPPLY PROBLEMS

Strengthening Supply System

Moscow SEL'SKAYA ZHIZN' in Russian 1 Aug 82 p 2

[Article by V. Kulikov (Saratovskaya Oblast)]

[Text] A fairly large area is planted in vegetable crops in the country and the gross yields of them are constantly increasing. This year too the vegetable conveyor is gathering force each day. Fresh produce is coming into the industrial centers --cabbage, carrots, cucumbers, squash and green vegetables. While noting the ever increasing amounts of "green vitamins" in the trade network, we also see that the level of their production that has been achieved does not satisfy the demands of the population in a number of places.

This problem must be solved by both increasing production of vegetables and providing for their preservation as well as reducing losses in all stages--from raising to selling fruits and vegetables.

Questions of further developing vegetable and fruit raising were considered in light of the decisions of the May (1982) Plenum of the CPSU Central Committee at an all-union conference-seminar that took place in Saratov. Participating in it were secretaries of party, kraykoms and obkoms, ministers fruit and vegetable raising of union and autonomous republics and chiefs of kray and oblast agro-industrial associations for fruit and vegetable products. They analyzed the state of affairs in the branch and earmarked ways of increasing its contribution to the implementation of the USSR food program.

It is no accident that the Saratov area was chosen as the place for this conference: there is something to be learned here. The oblast party organization and the local soviets of peoples' deputies, in carrying out the decisions of the 26th CPSU Congress concerning raising the standard of living of the Soviet people, are doing a large amount of purposive work for accelerating the development of vegetable raising: specialization and concentration of the branch, strengthening of its material and technical base, and bringing it closer to industrial production.

Here all problems are solved in complex and each is brought to completion. Several years ago, for example, the first hothouses were installed, and now the "gardens under glass" occupy dozens of hectares. Under the last five-year plan the area

planted in vegetables was increased 1.5-fold, and all the planted areas are on irrigated land.

An example of a well-thought-out, realistic approach to solving to vegetable problem is the creation of the first irrigated farm in the Volga area--the Engel'skiy Sovkhoz, where the conference-seminar was conducted. Of the 4,000 hectares of agricultural land here, 3,500 are irrigated. The sovkhoz is a profitable farm which annually produces 40,200 tons of products worth 12.7 million rubles.

The decisions of the May Plenum of the CPSU Central Committee brought about a new influx of creative effort in the collective. While according to this year's plan it is necessary to sell 34,000 tons of vegetables, the farm workers, having carefully the weighed the possibilities, promised to deliver 43,000 tons of them. And they are keeping their word.

The oblast has done a good deal to create vegetable belts around industrial centers, which has made it possible to sharply improve the supply of products for the population. The positive experience of the Saratov workers shows that when a serious and responsible approach is taken to the solution to the food problem, positive results are obtained. This is precisely the path that has been taken in many republics, krays and oblasts.

A strong base for increasing the production, procurement and processing of vegetables has been created around a number of cities and industrial centers, the network of specialized stores is being expanded, and the assortments and quality of the products delivered through direct ties from "field to store counter" are constantly improving. There is no doubt that there is a good deal of work to do in this area, and the concentration of the branch in one ministry--the Ministry of the Fruit and Vegetable Industry--is called upon to contribute to the acceleration of this. Created in 1980, it joins together more than 3,100 specialized sovkhozes and transportation, processing and trade enterprises.

At the May Plenum of the CPSU Central Committee, L. I. Brezhnev especially emphasized that this year in particular should be a serious test for the Ministry of the Fruit and Vegetable Industry. But, as experience shows, this test is not being passed everywhere: some have gone forward and there are also those who have stopped progressing or are standing still. In Moscow, Leningrad, Saratovskaya, Rostovskaya, Omskaya, Sverlovskaya and Lipetskaya oblasts and Krasnodarskiy and Krasnoyarskiy krays, the matter has been placed on a firm foundation and the b branches of the vegetable raising agricultural complex have been integrated, which has made it possible to improve the supply of vegetables to the population in a short period of time. But in Ivanovskaya, Tambovskaya, Ryanzanskaya and Irkutskaya oblasts and the Mordovian and Mary ASSR's and other places they are still slow at strengthening vegetable raising, even though this work is now being given exclusive attention.

In vegetable, fruit and dairy raising there are many problems which must be solved by combining the efforts of practitioners, scientists and all collectives of fruit and vegetable farms. Let us take the problems of seed growing. Under the last five-year plan the gross yields of vegetables increased by 40 percent as compared to the Ninth, but frequently the planning indicators are fulfilled as a result of

traditional crops and the assortment of them is still small. The production of late strains of cabbage and sharp strains of onions has been curtailed. This is happening because in a number of oblasts of the Russian Federation, Belorussia, Kazakhstan and other republics the amount of seeds that are produced do not meet the need, which leads to a violation of the principle of regionalizing them and raising vegetables of those strains that are most suitable for local conditions. In the regions where seeds have always been raised--Kurskaya, Yaroslavskaya, Ryazanskaya, Tambovskaya and Voronexhskaya oblasts--in recent years they have not been devoting as much attention to the production of vegetable seeds. In Kurskaya Oblast, for example, previously onion and carrot seeds were shipped out, but in the past three years they have not even satisfied their own demand.

The majority of agro-industrial associations in the RSFSR have still not changed their attitude toward the development of seed growing of vegetable crops. As a result of this, the assignment for planting stock nurseries was not fulfilled in the autumn of 1981 and, taking into account waste during their storage, the assignment for planting was fulfilled by only 90 percent. Such a situation must be rectified. Only a complete supply of seeds will make it possible to raise vegetables both in the given volumes and in the given assortment. The situation is similar with respect to seedlings of fruit and berry crops: they are not raised on a strictly scientific and industrial basis. The plan for spring planting of orchards and berry fields was not fulfilled by the farms of the Astrakhanskoye, Chechen-Ingushskoye, Kaluzhskoye, Gor'skovskoye and a number of other associations.

Significant amounts of money are now being allotted for strengthening the base of the USSR Ministry of the Fruit and Vegetable Industry. Hothouses, storehouses and processing enterprises are being introduced at rapid rates in Estonia, Armenia, Azerbaijan and Uzbekistan. But things are not going well everywhere: in the ministry as a whole the plan for contracting work for the first half year has been fulfilled by 95 percent. There are arrears in construction in a number of places in the Russian Federation, the Ukraine, Georgia, Tajikistan and Turkmenia. In order to assist the vegetable growers last year the Ministry of Installation and Special Construction Work allotted 139 sets of production facilities. But in the RSFSR the foundation has been laid for only six of its 33 facilities and two are being assembled. Only five of the 19 are being assembled in the Ukraine and not one has been put into operation.

The base for vegetable raising is growing slowly in Astrakhanskaya, Voronezhskaya and Belgorodskaya oblasts. The problem of creating a more powerful network of processing enterprises in regions of Siberia and the Far East has become crucial.

A busy time has come to the processing industry. Although the semiannual plan for the volume of sales of products in the RSFSR was fulfilled, certain enterprises did not provide for the production of a number of kinds of canned goods. They failed to deliver 55.5 million conventional cans of green peas, and the failure to fulfill the plan was mainly the fault of Krasnodarplodoovoshchkhoz. With a good yield of cucumbers, the Donetskonserv association did not fulfill the assignment for producing canned goods, and the Kabardino-Balkarskoye association did not produce all the necessary products. A number of canning plants in the country are not working at full capacity these days, and the labor assignments are not being fulfilled. Calculations show that if the plants work on three shifts, it is possible

to produce an additional 3 billion conventional cans of goods. It is also necessary to use such a source of augmenting the raw material supplies of the enterprises as the purchase of fruits and vegetables from the population. So far, unfortunately, this reserve is not being fully utilized.

As was noted at the May Plenum of the CPSU Central Committee, the food program sets assignments for various time periods--long-term, medium-term, short-term and immediate. The immediate task of the collectives of the Ministry of the Fruit and Vegetable Industry is to make an essential change this year in providing the population with good fruit and vegetable products.

I. K. Kapustyan, deputy chief of the agricultural division of the CPSU Central Committee, participated in the work of the conference.

Improving Supply Channels

Moscow SEL'SKAYA ZHIZN' in Russian 6 Aug 82 p 1

[Text] On the route to Volgograd to Moscow one sees the rush of a motorized avalanche with license numbers from many oblasts of the country. One is also surprised by the abundance of "service" and "special" vehicles. Many of them are turning off to the city markets in Volgograd.

What causes the drivers to rush here over hundreds of versts at such a busy time? Some TASS correspondents asked about this in the very center of the crowd of "business machines."

We went up to a bus of the Uvarovskaya truck convoy of Tambovstroytrans at the very moment when the hundredth barrel of apricots were being loaded on it. As the instructions of the convoy director and the chairman of the local committee said, a vehicle had been sent to purchase them. The payment for the trip at both ends, like the actual loss of working time of the purchasers, as we see, did not bother the management of the automotive convoy.

The deputy head engineer of the Kamenskiy sugar plant in Penzenskaya Oblast, A. Kholodov, clearly confused the plant indicated on the trip instructions with the central market. When the back of the bus was filled with vegetables and fruits there was no room for the two engines for which it was supposed to have taken this long trip.

A desire to exchange work experience with his Volgograd colleagues led the director of the Borioglebskiy agricultural tekhnikum . . . to the market. Along with his subordinates, he was glibly loading apricots into the back of the Kuban' bus. The director was supposed to have been visiting the hydromelioration tekhnikum where, incidentally, they had no suspicion that he had arrived!

Many other service and special machines appear at the city's markets these days with good pretenses and without them. And yet one would hardly decide to purchase fruits and vegetables in such distant areas if they had to pay for the transportation expenditures out of their own pockets. Incidentally, the result of these voyages the prices at the markets have jumped 2-3-fold.

Another conclusion comes forth. It means that there are not enough of the products for which people go under the pretense of a business trip in the places where they live? What is being done to provide efficient supply of fruits and vegetables for the central and northern regions of the country? The correspondents asked about this in the USSR Ministry of the Fruit and Vegetable Industry.

"Questions of procurements and deliveries of fruits and vegetables are especially clearly at the center of the attention of the branch's subdivisions," says the deputy chief of the ministry administration, R. Manukyan. "In keeping with the food program, the southern regions of the country are becoming the main basis for supplying the center and north of the European part, the Urals, Siberia and the Far East with products of heat loving vegetable, fruit and berry crops. A good crop is ripening in the gardens and orchards this year. All measures are being taken to make sure that they are delivered to the consumers quickly, without losses and with high quality. The fulfillment of these measures will depend largely on how well the work of related industries is arranged."

The interaction of the units of the agro-industrial complex for the procurement of fruits and vegetables is controlled by the operations staff that was created under the USSR Ministry of the Fruit and Vegetable Industry. At its last meeting, with the participation of representatives of all union republics and interested ministries and departments, there were many complaints, particularly against workers of Gossnab and the Ministry of Railroads because of their inadquate supply of packaging and transportation.

Thus 50,000 tons of table grapes are to be delivered from Azerbaijan this year. The republic has revised this figure: they have found it possible to increase the deliveries by another 10,000 tons. In order to take advantage of this reserve, more than a million boxes are necessary. But enterprises of Glavtar are still unable to satisfy this demand.

The difficulties are not only in providing for above-plan deliveries, but also in filling planned orders for packaging. The whole problem is that the manufacturers are paid in terms of cubic meters. Many boxes are made of boards whose thickness and width, and hence volume, are clearly greater than what is required. As a result there is an overexpenditure of wood and the actual capacities of the packaging are less than is intended in the plans.

There are also problems in providing for shipments. The Ministry of Railways was unable to create a sufficient reserve of cars on a number of railroads so that they could be used for fruits and vegetables. And there are not very many air flights for fruits and vegetables. For example, the number of them from Uzbekistan is only half of what is required. At the same time there are many reserves for providing for shipments. One of them is rapid loading and unloading of transportation. For example, according to data of the Ministry of Railways, on 3 August more than 1,500 cars were sent, in keeping with orders, for fruits and vegetables, but they were unable to load almost 400 of them and almost as many remained full. And 400 cars amounts to the daily requirement of such a large supplier as Moldavia.

At the staff meeting they earmarked concrete measures for eliminating the shortcomings. A great deal is being done so that the consumers will be able to acquire

products in the stores that are just as good as those on the market, but at a lower price. But in a number of places the market still decides this question, and it is occupied not only by venicles of private owners, but by a number of all kinds of "service" and "special" vehicles that have come from a long ways away.

Processing RSFSR Production

Moscow IZVESTIYA in Russian 10 Jul 82 p 2

[Article by V. Kozharov, chief of Rosglavkoopprom (Moscow)]

[Text] The consumers' cooperatives of the RSFSR have created capacities for processing local fruit and vegetable raw materials in almost all the oblasts. There are 35 oblasts that have vegetable drying shops for processing potatoes, onions, carrots, beets and garlic. All these shops were constructed in zones where the crops are produced. Last year alone it was planned for them to process 75,000 tons of potatoes, 30,000 tons of onions and 12,000 tons of other vegetables.

But the drying shops of the Orlovskiy, Ryanzanskiy, Kirovskiy, Mariyskiy, Mordovskiy, Udmurtskiy, Novosibirskiy and Omskiy consumers' unions have failed to obtain 30,000 tons of potatoes for industrial processing. At the same time the consumers' unions have shipped 87,000 tons of potatoes out of these oblasts. This is taking place because local processing is the last to receive potatoes. This is precisely why the vegetable drying plants remain without raw material each year. What is the solution to this? We agree with those specialists who think that potatoes and vegetables for industrial processing should be included in the unionwide fund. Rospotrebsoyuz has already made this request to the RSFSR Gosplan twice, but so far they are not hurrying to solve the problem.

Dried vegetables and potatoes are used not only in the food concentrating industry, but also in the canning and fish industry. Having organized drying of onions in the regions where they are produced, naturally, it was intended to procure and store them up locally. Moreover, the processing capacities were intended for processing onions of the strong varieties (Arzamasskiy and Bessonovskiy) with a content of dry substances of 15-17 percent. But in recent years certain oblasts have curtailed the production of onions completely, including the strong kinds. They have stopped raising these kinds of onions in Gor'kovskaya, Ryanzanskaya, Yaroslavskaya, Bryanskaya and Belgorodskaya oblasts. As a result, the consumers' cooperative industry has been forced to ship onions in from other oblasts, where the majority of them are the sweet sort, containing 8-10 percent dry substances.

Using this kind of onion for drying increases the expenditure per ton of prepared products 1.5-2-fold, and also expenditures of heat and electric power, the productivity of the drying machines decreases, and the production cost of the dried onions increases. In order to avoid such phenomena in the future, it is apparently necessary, when planning and determining the structure of vegetable production locally, to take into account the availability of existing capacities for industrial processing and to take a comprehensive and balanced approach to determining the gross yield and the planted areas, and also to take into account the constant demand for onions both for trade in fresh form and for processing.

In the past 10-15 years there has been increased development of the food concentration industry, which is one of the main consumers of dried vegetables and potatoes. Under the Tenth Five-Year Plan there appeared a new consumer in the form of the Ministry of the Fish Industry. And the producers of dried vegetables and potatoes are enterprises of the ministries of the food industry and fruit and vegetable industry of the RSFSR and the Rospotrebsoyuz. The production of dried vegetables and potatoes was created in the Rospotrebsoyuz mainly for serving the population of the regions of the Far North and partially for their own canning industry. But the USSR Ministry of the Food Industry is in charge of all distribution of dried vegetables and potatoes. A situation has arisen whereby cooperative enterprises are practically not economically motivated to increase production since they do not have the opportunity to utilize the dried onions and carrots at their own plants.

And this takes place because the Rospishchesnabsbytsyr'ye gives orders to ship out all the dried vegetables and potatoes that are produced by the cooperators. In keeping with these orders the cooperative industry ships out dried products to enterprises of the Ministry of the Food Industry, Ministry of the Fish Industry, Ministry of the Meat and Dairy Industry and others. And our orders and requests to allot, for example, onions for our own canning industries are not answered.

A strange situation arises: we are not allowed to utilize what we produce ourselves. Attempts on the part of cooperators to keep for themselves any quantities of dried onions or carrots are considered to be a violation of the delivery plans. But how does one regard the actions of Rospishchesnabsbytsyr'ye, which does not satisfy orders of the cooperative industry and does not issue orders for 400 tons of dried onions and 120 tons of carrots for our own needs from the 3,100 tons that are planned for production?

Now, when the agro-industrial complex is being separated into an independent object of planning and administration, the delivery plans should be balanced, in order to save the gifts of the gardens and fields it is necessary to try to process as many of them as possible in local production!

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CSO: 1824/520

LIVESTOCK FEED PROCUREMENT

ACCOUNTABILITY FOR LITHUANIAN FEED PROCUREMENT

Vilnius SOVETSKAYA LITVA in Russian 18 Jul 82 p 2

/Article by Yu. Vasilyauskas, chief of the Investigatory Administration of the Ministry of Internal Affairs for the Lithuanian SSR: "Thievery"/

/Text/ There is a saying: that which is lying loose and unaccounted for is readily appropriated. We might also add that it is appropriated by dishonest and at the same time extremely resourceful individuals. The "experience" of Al'binas Yuraytis and Al'girdas Klimas of the village of Lepinay in Kapsukskiy Rayon, individuals lacking definite (legitimate) occupations), once again confirms this popular saying. True, we do not have in mind here that the materials were lying loose but rather that they were transported in an uncontrolled manner and were not properly accounted for.

It all began when these enterprising dealers from Lepinay concluded a private agreement with drivers from the Kapsukas Motor Transport Enterprise I. Marchyulaytis, I. Yanulyavichyus, T. Lyutas, V. Bendzhyus and A. Shukaytis for the "delivery" of livestock mixed feed at a suitable price.

The sales-purchase operation was carried out in a very simple manner. The above-mentioned drivers, who were at the same time performing the duties of forwarding agents, obtained their appropriate freight at the Kapsukas Grain Products Combine for delivery to various farms throughout the republic. Along the road they stopped near the farmsteads of Klimas or Yuraytis who, using bags prepared in advance, would remove a portion of the mixed feed from the bodies of the motor vehicles, thus establishing themselves as new merchants.

Nor are we using the term merchant for the sake of rhetoric. Rather it is used owing to the fact that Klimas and Yuraytis procured high quality industrially produced feed not so much to satisfy their own private plot requirements but rather for resale purposes in order to realize some profit. And not just to private individuals but to official parties as well, including to representatives of the same farms for which the feed was originally intended in accordance with the invoices and route-transport documents. A reader can only view as fantastic a situation wherein the same kolkhoz pays twice for the same batch of mixed feed obtained from a combine: once privately -- through the market and thereafter officially -- through a bank.

On a winter day this year, A. Klimas, while at a kolkhoz market, struck up an acquaintance with driver S. Kiga of the Pavasaris Kolkhoz. A transaction was

quickly concluded. Several days later Kiga obtained approximately 5 tons of mixed feed at a combine and without further ado he delivered it to Klimas and received 750 rubles. The invoice together with 100 rubles of "bonus" money was delivered on the very same day to the storehouse of the O. Pechyulen Kolkhoz. The latter credited the feed obtained in this manner to the income and expenditure cash book. And all this happened very quickly. For these mythical 5 tons, the kolkhoz had to transfer money to the combine's current account and thereafter it used cash for obtaining feed for the public herd from the profiteers.

However, it can be stated directly that this was an extreme variant. For Klimas and Yuraytis everything was far more simple with the drivers from the ATP /avtotransportnoye predpriyatiye; motor transport enterprise/. But naturally a question arose once again: what explanation could the drivers give to the legal purchasers of the feed regarding the deficit which developed as a result of the delays which occurred at the farmsteads of their companions? It turns out that no such explanation was called for.

For example, A. Shukaytis delivered a vehicle containing feed to the Grazhishketis Kolkhoz in Vilkavishkskiy Rayon and the local storekeeper I. Brokas did not even bother to check the seal on the freight. And the freight could not be measured -- no scales were available. Shukaytis also had friendly meetings with storekeepers Ch.K. Orlyukas at the Kapchyamestis Kolkhoz in Lazdiyskiy Rayon, O. Kel'monen at the Balandis Kolkhoz in Kapsukskiy Rayon and others. It bears mentioning that seven farms in Kapsukskiy Rayon lack motor vehicle scales. If to this we add the fact that the work of drivers is not properly controlled at the ATP and that very little interest is being displayed in the deviations by many of the drivers from their assigned routes or in the unhindered appearance of strangers on the territory of the enterprise, then it is not difficult to imagine the degree of thievery that reigns in the sphere of output sales by the Kapsukas Grain Products Enterprise.

Thus the practice has been established on some farms of procuring mixed feed privately. The chairman of the Draugiste Kolkhoz in Pasval'skiy Rayon, V. Valeyka, purchased 8.5 tons of feed at a speculative price from our companions. And how simple it was! No thought was given to the fact that the goods purchased were in all probability stolen from the state, nor were his partners in the transaction asked to show the appropriate documents. In addition, the document was signed by fictitious names and contained false passport numbers.

When the cheats were apprehended and criminal proceedings instituted against them, the deputy chief of the investigative branch of the Kapsukas GROVD /not further identified/ D. Snapkauskene, in conformity with Article 159 of the UPK /Code of Criminal Procedure/ for the Lithuanian SSR, sent the appropriate evidence to the interested organizations. But it cannot be stated that all of the addressees welcomed the proposal by the investigative organs to undertake specific measures aimed at eliminating those circumstances which promote the committing of crimes. The Lazdiyskiy Rayon Agricultural Administration, for example, responded in a very formal manner. It stated that it had discussed the subject, outlined specific measures and issued warnings. But who and how? We have yet to receive an answer to this question. The reports received from Vilkavishkskiy and Pasval'skiy Rayons were somewhat more convincing. Judging from all appearances, the measures adopted here amount to nothing more than discussions. But it is our opinion that measures of an economic nature are required.

Here we have in mind the need for preventing the squandering of feed for public livestock production, the development of which as is well known is one of the chief tasks of the food program proclaimed by our party and state. Mismanagement and indifference in organizing accounting and control over the distribution of livestock feed cannot be tolerated. Regardless of the forms and dimensions of these scandalous practices, they can at times reduce to naught the efforts of many honest workers in the cities and rural areas, efforts aimed at the successful implementation of the decisions handed down during the May Plenum of the CC CPSU. The slightest encroachments upon national property must be properly countered not only by the legislative organs but also by society as a whole and all citizens.

These schemers from Kapsukskiy Rayon carried out their crimes with impunity, in essence in view of all and in broad daylight. Why is it that their associates maintained the view for a long period of time that they did not notice these crimes being committed against this valuable public product and on an outstanding scale? Indeed, it turned out that almost 21,000 kilograms of mixed feed were stolen and resold, feed which the republic's farms should have received without interference by the profiteers.

The court sentenced the characters in this disgraceful story to various and extended periods of imprisonment. And although justice triumphed, the matter has still not been concluded. The reaction to this judicial process should be more extensive and it should serve as an object lesson for many officials, for the economic and social leaders of collectives and departments and also for rank and file workers.

7026
CSO: 1824/474

LIVESTOCK FEED PROCUREMENT

FEED PROCUREMENT PROBLEM AREA, LITHUANIAN CONFERENCE NOTES

Vilnius SOVETSKAYA LITVA in Russian 15 Jul 82 pp 1-2

/Article: "Chief Tasks of the Farmers During the Busy Period of Summer and Autumn Harvesting Operations"/

/Excerpts/ In the decree handed down during the May Plenum of the CC CPSU concerning the food program, emphasis is placed upon an immediate task -- raising considerably the productivity of farming and livestock production this year, fulfilling and over-fulfilling the plans for the production of grain, meat, milk and other products and also their sales to the state and establishing a strong foundation for the accelerated development of agricultural production in subsequent years.

The preparations for the harvest work, the sowing of the winter crops, feed production and also other tasks upon which the solutions for these problems are dependent were discussed during a conference held in the Central Committee of the Communist Party of Lithuania on 13 July.

The tasks of the farmers, organizations, ministries and departments which service agriculture and those of the party, soviet, professional trade union and komsomol organizations in this area were discussed during the conference by the 1st secretary of the Central Committee of the Communist Party of Lithuania P. Grishkyavichus and a secretary of the Central Committee of the Communist Party of Lithuania V. Astrauskas. The conference was attended by the chairman of the republic's Council of Ministers R. Songayla.

Speeches were also delivered during the conference by the 1st Deputy Minister of Agriculture S. Vasilyauskas, the director of the Perloyskaya Experimental Station of the Lithuanian Institute of Farming I. Aleksonis, the director of the Vezhaychskiy branch of the institute V. Knashis, the director of the Ionishkel'skaya Experimental Station Yu. Zabarauskas, the director of the Institute of Farming A. Budvitis, the director of the Institute for the Mechanization and Electrification of Agriculture A. Prapuolyanis, the Minister of the Fruit and Vegetable Economy V. Eynoris and the Minister of Procurements L. Karyatskas.

To Continue the Intensive Procurement of Feed and To Utilize Additional Reserves

The farms in a majority of the rayons have already harvested their first cutting of grass and have procured considerable quantities of valuable feed. However, the amount procured for the republic as a whole is less than that of last year and

fact, as emphasized during the conference, has aroused a considerable amount of concern, particularly in view of the fact that in rayons and on farms having similar conditions different quantities of feed have been obtained. This falling behind is especially noticeable on farms in Raseynskiy, Shvenchenskiy, Shal'chininskiy, Lazdiyskiy, Zarasayskiy and Maxheykskiy Rayons, where as yet only 3.8-4.1 quintals of feed units have been procured per standard head of large-horned cattle. It would appear that proper attention is not being given to this important work in all areas.

An urgent requirement exists at the present time for completing the harvesting of the remaining grass. Taking advantage of the more favorable weather, every attempt should be made to procure as much hay as possible. Moreover, prior to the harvest, all of the annual grasses remaining for haylage and silage should be harvested on each farm and it is recommended that more extensive use be made of preservatives when ensiling them. No delay should be tolerated in harvesting the aftergrowth, which is growing well at the present time. In each rayon and each farm a determination should be made as to how much grass feed will be procured from this aftergrowth specifically and also from non-agricultural lands. Each farm must fulfill its plans for the procurement of all types of feed -- more should be procured than was the case last year. All of the teams on the farms must campaign to obtain high quality feed. All rural workers should be mobilized in order to ensure successful fulfillment of the feed procurement plans and supporting organizations and helpers from the cities should be attracted to participating in this work.

It was mentioned during the conference that milk production has increased noticeably on a majority of the farms. The task has been assigned of ensuring that the milk yield per cow for July and also the gross production of milk are at a level which will make it possible to overcome the lage that has developed in this area compared to last year and to complete the year with better results. Generally speaking, during the grazing period this year and considering the ample amount of nutritious grass that is available, an increase should take place in the intensity of raising large-horned cattle on a fattening regime. However the grazing has not been organized properly in all areas. Those leaders and specialists of farms where unharvested and overgrown grass remains on the pastures are deserving of criticism. This delays further aftergrowth. We cannot justify a situation wherein a portion of the pastures has not been given a top dressing in the proper manner.

At the present time, with the cattle out on the pastures, the livestock yards should be prepared for the winter and zooveterinary measures carried out aimed at improving the health of the livestock.

During the conference, the confidence was expressed that the party and soviet organs in the various areas and the primary party, professional trade union and komsomol organizations will launch a socialist competition among the rural workers for the successful fulfillment of the tasks for the second year of the five-year plan and that the farmers of Soviet Lithuania will make a worthy contribution towards carrying out the food program.

7026
CSO: 1824/473

MEASURES TO INTENSIFY LITHUANIAN LIVESTOCK FEED PRODUCTION

Msocow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 7, Jul 82 pp 15-20

[Article by Stasis Yuozovich Vasilyauskas, first deputy minister of agriculture of the Lithuanian SSR: "A Stable Feed Base--the Basis of Highly Productive Animal Husbandry"]

[Text] The daily affairs and thoughts of Lithuanian agricultural workers, like those of all Soviet people, are imbued with a fervent desire to implement the historic decisions of the 26th CPSU Congress and the May (1982) Plenum of the CPSU Central Committee.

Displaying good organization, creativity, initiative and true labor heroism, frequently under extremely difficult weather conditions, agricultural workers of the republic achieved results in the first year of the Eleventh Five-Year Plan. General Secretary of the CPSU Central Committee, Chairman of the Presidium of the USSR Supreme Soviet, Comrade L. I. Brezhnev in his congratulatory letter gave a high evaluation to the work of the farmers, which was a great mobilizing factor for all workers of the republic for their subsequent struggle for high indicators, production effectiveness and product quality.

In order to increase the gross yield and improve the quality of feeds, each farm, rayon and also the republic as a whole has drawn up and are implementing comprehensive programs for the development of feed production. These programs envision a system of measures for sequential intensification of feed production and its changeover to an industrial basis, taking into account acientific and technical progress, specific natural conditions and efficient utilization of local internal resources.

As a result, in 1981 the amount of coarse and juicy feeds, translated into feed units, that were procured was increased by one-fourth as compared to 1980. Strengthening the feed base made it possible to increase the productivity of the livestock; the average annual gross milk production increased during the Tenth Five-Year Plan as compared to the Ninth by 1.1 percent, milk--by 19 percent and eggs--1.5-fold.

A significant increase in the milk yields and the live weight gains of animals is possible only with good feed which is balanced in protein and other nutritive substances. The rates of intensiveness of the development of the republic's main branch of agriculture--animal husbandry--which produces about 85 percent of the

monetary income, depends to a decisive degree on further intensification of crop growing as a whole, and primarily on the development of feed production.

The republic's crop growing basically satisfies the needs of animal husbandry for high-quality feeds. About three-fourths of the crop growing products are fed to livestock. The feeds obtained on the fields, hayfields and pastures comprise about 90 percent of all the feeds that are distributed.

As before, the main solution to the feed problem is still to increase grain production. Despite the unfavorable weather conditions of recent years, the average annual production of grain under the Tenth Five-Year Plan was 17 percent greater than the average annual result of the Ninth Five-Year Plan. The areas planted in grain crops on the farms of the republic increased from year to year. During the past ten years the area planted in grain crops increased by 327,000 hectares and at the present time amounts to more than 50 percent of the arable land. By 1985 the area planted in grain crops will not have increased significantly. Therefore the main path to increasing the gross yield of grain in the republic is to increase the productivity of the grain crops. In this connection we intend to improve the agrotechnology of cultivation and to introduce into production more rapidly the new strains of grain crops that are valuable under the republic's conditions. A significant reserve for increasing the gross grain yield lies in improving the structure of the grain fields through expansion of the areas planted in the more productive crops. In the Latvian SSR these crops are winter grain crops and barley.

Special attention is being devoted to prompt planting and reduced losses during harvesting. The strains of grain crops are selected taking into account the possibility of somewhat extending the period of grain harvesting and beginning reaping as early as possible. This is brought about primarily by the shortage of grain harvesting combines. Therefore the farms are trying to cultivate early ripening barley in a quantity which makes it possible to harvest it before the beginning of the ripening of the main grain crops, which will make it possible to reduce the intensiveness of the work during the harvest period.

Moreover, it should be noted that under the conditions of the over-moist climate the existing combines do not provide for high-quality threshing. When barley is harvested during the phase of full ripeness the handling capacity of an SK-5 combine is only 5 kilograms per second.

Farmers of the republic have been given a difficult, but quite possible task--to provide under the current five-year plan for an average annual grain production of 3.2-3.4 million tons. The experience of the leading farms shows that when the level of farming is high, when all rules of agrotechnology are observed and when the same amount of attention is given to all jobs, even to those that appear less significant at first glance, large yields of grain and other crops are obtained each year. Thus the productivity of grain crops on the Order of Lenin Baryunay Kolkhoz in Ionishkskiy Rayon, the Kolkhoz imeni Kapsukas and the Order of Lenin Chernyakhovskiy Kolkhoz in Kapsukskiy Rayon, the Order of the Labor Red Banner Ritu aushra Kolkhoz in Kedaynskiy Rayon and a number of others reaches 40 quintals per hectare and more.

But it must be noted that many farms do not have the capability of applying optimal doses of mineral fertilizers to the grain crops. Therefore more attention is being devoted to efficient and high-quality utilization of fertilizers. Moreover, the areas on which organic fertilizers are being applied to grain crops, especially to winter crops, are being expanded each year.

The fields planted in feed crops in the republic presently amount to 950,000 hectares or 42 percent of the arable land. Further expansion of the areas planted in feed crops is limited. Therefore the volumes of feed production can be increased through increasing the return from each hectare of arable land and planted and natural feed lands.

The Draugas Kolkhoz in Radvilishkskiy Rayon, the Tieysa in Panevezhskiy Rayon, the Zhel'svyale in Kapsukskiy Rayon, the Sotsialistinis kyalyas in Plungeskiy Rayon and others are distinguished by high indicators for the production of feeds and animal husbandry products. Because of the advanced science of farming, skillful utilization of fertilizers and equipment and good organization of labor, the hay yield from the crop hayfields on these farms amounted to 60-80 quintals per hectare, milk productivity per 100 hectares of agricultural land reached 700-1,000 quintals, and meat productivity--150-300 quintals.

Improving the structure of the planted areas plays an important role in the measures for increasing the productivity of feed crops. Of the perennial grasses the areas planted in clover and alfalfa will be expanded, and of the annual crops--legume and grass crops. In the areas planted in grass mixtures there will be a predominance of such valuable perennial grasses as awnless brome grass and reed-grass. Annual rye grass will be planted more extensively. One of the ways of intensifying feed production and increasing the yield of feed protein is to expand the areas planted in peas, vetch, lupines and multicomponent mixtures.

Perennial grasses account for no small proportion in the feed balance. Their area amounts to 550,000 hectares or about 24 percent of the arable land. Timothy and clover are the main perennial grasses in the crop rotations on the farms of the republic. But as a result of the unfavorable weather conditions of recent years the areas planted in perennial grasses have suffered severely. Some of them have died and the rest have been severely thinned, and perennial leguminous grasses have suffered especially. This had a marked effect on the seed growing of perennial grasses. Therefore in recent years, because of the shortage of seeds of clover, in the grass stands of perennial grasses there has been a predominance of herbacious grasses which, in turn, increased the need for mineral fertilizers even more. In this connection the agrochemical service is faced with an immediate task--to restore the plantings of leguminous grasses.

The republic is doing a large amount of publicity and organizational work to change seed growing over to an industrial basis. First of all there is a universal changeover of the raising of leguminous grasses for seeds only on special seed sections.

On seed sections of early ripening clover it is very important for the first mowing of the grasses to be done early everywhere. Farms of the republic are placing great hopes in alfalfa, whose area is to double by the end of the five-year plan. But

expansion of the areas planted in alfalfa involve difficulties, mainly brought about by problems of seed growing.

Annual grasses occupy a certain place in the provision of livestock with feeds. In recent years the area planted in them has decreased somewhat and now amounts to about 10 percent of all the planted areas. Annual grasses are raised both for silage and for green fodder. Additional measures are being taken to significantly increase their productivity. The leading farms of the republic obtain 400-500 quintals of green mass from one hectare.

Mainly vetch and oat mixtures are used in the republic. But on lighter soils mixtures of alfalfa and oats are planted. In order for the plantings not to lodge, sunflowers are sometimes added to the vetch and oat mixture. Many farms add feed legume crops to the grass mixtures.

In order to create a continuous green conveyor the mixtures are planted at several times: the first planting is done as soon as the soil conditions allow; the second --at the beginning of May; the third--at the end of May (mainly after harvesting winter rye for green fodder). In the late autumn the farms of the republic use feed cabbage more and more extensively. It produces 300-400 quintals of green mass from one hectare.

The Lithuanian SSR is located in a zone with abundant moisture. There is an annual average of 600-650 millimeters of precipitation. Under these conditions crop pastures and hayfields play an important role in supplying the livestock with feeds.

At the present time the areas of hayfields and pastures amount to about 1,073,000 hectares, of which 530,000 hectares are crop pastures and 200,000 hectares are cultivated hayfields. There are 0.42 hectares of crop pastures per one conventional head of large horned cattle. In the majority of rayons of the republic the natural hayfields and pastures are marshy and covered with bushes so they produce small yields. Their productivity does not exceed 700-800 feed units per one hectare. Therefore it is a primary task to cultivate them and increase their productivity. Since 1959 all measures for cultivating natural land have been done comprehensively. Draining, cultivating and agrotechnical work, including the planting of grass mixtures and the application of fertilizers, both during the year of meadowing and in the first year of utilization of the land, fencing the pastures, and constructing grazing areas are done by land reclamation organizations.

The many years of experience of the Lithuanian Scientific Research Institute of Agriculture and the practice of the leading farms shows that the pasture method of maintaining livestock during the spring and summer period is the most effective both from a zootechnical and zoohygienic and from an economic point of view. Green feeds of crop pastures are fully balanced in protein and vitamins and are the least expensive. The production cost of one feed unit of pasture feed amounts to 3.5 kopecks on an average for the republic. During the summer the farms obtain more than half of the annual volume of milk with minimal expenditures.

In our opinion, in order for crop pastures and hayfields to be constantly highly productive, they should not only be utilized efficiently and fertilized, but they should also be restored promptly. As a result of an inventory of crop pastures

and hayfields, many farms discovered many less productive, old areas of land. Therefore under the Eleventh Five-Year Plan it is intended to radically replant 15,000 hectares annually and to restore 35,000 hectares of less productive crop pastures and hayfields, which is twice as much as under the Tenth Five-Year Plan.

The farms of the republic are constantly improving the utilization of cultivated grass stands. The majority of farms have created mechanized brigades for tending the cultivated pastures. Progressive portional technology for grazing cattle, using electric fences, has been introduced everywhere. Technology has been developed for grazing cattle in groups of 200 head each.

As a result of measures taken in 1980 the productivity of cultivated pastures reached 3,200 feed units from one hectare, and in 1981--3,400 feed units from one hectare. The leading farms annually obtain 6,000-6,500 feed units.

The procurement of grass feeds is technically a most complex process, and high quality of the products is ensured only with strict observance of technological requirements. Especially great difficulties arise when procuring hay and haylage. In order to accelerate the wilting of mowed grass, depending on its productivity, it must be turned 3-4 times a day. Unfortunately, because of the critical shortage of rake agitators the wilting of the grasses is still not taking place properly.

The republic has accumulated a wealth of experience in completing the drying of hay by the active ventilation method. At the present time 95 percent of the public hay is prepared by this method. In the next few years it is intended to prepare all of the hay in the republic only by this method. The introduction of active ventilation for completing the drying of hay reduces the losses of nutritive substances by more than 20 percent as compared to field drying. This technology for preparing hay has made it possible, besides obtaining an additional quantity of feed units, to reduce the intensity of work during the haying period since it makes it possible to complete the drying of grass with a moisture content of up to 45 percent.

Practice has shown that when hay is stored in an open place (in stacks) there are large losses of nutritive substances. Therefore the republic has done an immense amount of work to construct hay storehouses and sheds. At the present time practically all of the hay that is prepared is stored under a roof. In the standard hay storehouses for active ventilation that have been constructed and are being constructed, they use the withdrawn ventilation channels that were developed by the Lithuanian Scientific Research Institute of Mechanization and Electrification, which considerably simplifies the technology of completing the drying of hay.

Haylage is a progressive form of feed which comprises about 30 percent of the coarse feeds. Each year the republic prepares 1 million tons of haylage. Losses during the preparation of this feed do not exceed 30 percent. But because of the shortage of highly productive feed harvesting equipment, there are violations of technology and reduction of the quality of the feeds during storage.

The farms of the republic are preserving more and more feeds with chemicals. This makes it possible to retain up to 95 percent of the nutritive substances. In 1981 almost one-fifth of the silage was prepared with chemical preservatives. On the Pabirzhe Kolkhoz in Birzhayskiy Rayon, the Norkishkis Sovkhoz in Tauragskiy Rayon

and the experimental farm of the Radvilishkskiy experimental station up to 80 percent of the grass silage is prepared with chemical preservatives. The quality of this silage always meets the first class standard. Chemical preservatives can be used not only when preparing silage and haylage, but also when preparing hay, especially with rolling technology.

In order to economize on concentrates in the rations of hogs we have begun to produce mixed silage which is a source of vitamins and other nutritive substances. One kilogram of such silage contains 0.25 feed units, 20 grams of digestible protein, and 10-20 milligrams of carotin. The best raw material for preparing mixed silage consists of carrots, potatoes, feed root crops, the aftergrowth of perennial leguminous grasses and grass choppings. In 1981 the republic prepared 35,000 tons of mixed silage, and by the end of the five-year plan it is intended to increase this production to 150,000 tons. Valuable experience in preparing this silage has been accumulated by the kolkhozes and sovkhozes of Kapsukskiy Rayon. Even this year it is intended to allot up to 2,000 hectares to be planted in carrots and up to 6,500 nectares in potatoes for the preparation of mixed silage. The production of mixed silage makes it possible to sharply reduce losses during the storage of root crops. Straw has become an important reserve for augmenting the resources of root crops on the farms of the republic. Until recently most of it was prepared in bulk form. But practice has shown that with this kind of technology there are great losses. Therefore the farms are introducing progressive technology for preparing straw.

At the present time more than half of this straw intended for public animal husbandry is prepared in pressed form, for which the well-recommended roller presses are used. Straw is also picked up from the gang mows and crushed. This is the main way that straw is harvested from sections with undersowing of perennial grasses, and grain combines with straw crushers are used extensively. The farms of the republic use much of the straw to prepare silage, adding a certain quantity of water, and also mixing in corn and aftergrowth of perennial grasses.

Much has been done to improve the quality of the feeds that are prepared. In 1980 71 percent of the hay that was inspected was of a high class and in 1981 94 percent was; for silage these figures were 80 and 89 percent, respectively, and for grass meal--82 and 98 percent, respectively.

The quality and the nutritional value of the feeds are checked by the laboratory method on all the farms. In 1981 all the public hay, three-fourths of the silage and haylage and a large portion of the grass meal were inspected. In the near future, by expanding the production capabilities of the republic agrochemical laboratory, it will be possible to determine the quality of the basic grass feeds.

Storage conditions are of great importance in improving the quality of feeds. During 1976-1981 the republic constructed haylage and silage structures with an overall capacity of 1.7 million tons of feeds. As a result, at the present time all the haylage and about three-fourths of the silage are stored in permanent trenches.

But good organization of work plays a decisive role in improving the quality of feeds. In addition to observing the optimal time period for mowing grasses,

primary attention is being devoted to the correctness of the technology for storing silage and haylage.

During the haying period the preparation of feed on each farm depends on weather conditions. During good weather they prepare mainly hay and if the weather becomes worse they store up haylage. When the conditions are extremely poor they do not shut down the feed production conveyor, but begin to prepare silage with the addition of chemical preservatives.

Obtaining a sufficient quantity of high-quality grass feeds depends on successful haying. The optimal time for harvesting the first grass is June. The majority of the farms maintain these conditions. But in order to reduce losses of nutritive substances, in the future it will be necessary to reduce the time periods for harvesting the grasses.

Grasses are early, medium ripening and late, depending on their kind, but all of them must be harvested early. Herbacious--in the phases of stem extension and pillaring, leguminous--in the phases of budding and blossoming. At this time the plants contain the least cellulose, 17-20 percent dry substance, and 15-18 percent digestible protein. With early mowing times there is further intensive development of the aftergrowth and the possibility of harvesting a full crop, and the early ripening kinds of grasses can be harvested up to three times. In order to increase feed production and improve its quality, it is necessary to changeover to at least two mowings of grasses.

Organic fertilizers play an important role in increasing the intensiveness of farming. They affect the quality of the soil and the conditions for the nutrition of the plants. The republic has devoted most attention to correct utilization of manure that is accumulated on the farms. Most of the manure is applied to row crops in the autumn. As early as 1982 it is planned to apply an average of 12 tons of organic fertilizers per one hectare of arable land.

The republic has done a great deal to prepare the feeds for distribution. Each year the mixed feed shops of the kolkhozes and sovkhozes produce about 300,000 tons of mixed feeds and more than 60,000 tons of full-value briquette granulated feeds. About 90 percent of the straw intended for public animal husbandry is distributed in a preliminarily processed form.

A good deal of work is being done for the mechanization of feed preparation. An extensive program for the construction of KORK-15 shops for preparing moist feed mixtures has been developed for the Eleventh Five-Year Plan. By 1985 it is intended to construct 486 of these feed shops, that is, one for each standard large farm.

Intensification of animal husbandry and its development on an industrial basis are impossible without a guaranteed stable feed base. The large expenditures on the construction of complexes, mechanization and electrification of animal husbandry facilities will not be very effective without adequate, balanced feeding. The proportion of expenditures on feeds in the structure of the cost of animal husbandry products is 60-70 percent. Therefore efficient organization of feed production is basically a decisive part of increasing the profitability of animal husbandry. It

has been established that when the animals are fed feeds that are balanced in all nutritive substances their productivity increases by 20-30 percent. When there is a shortage of digestible proteins in the ration there is an overexpenditure of up to 40 percent in the feeds.

For intensive feed production it is necessary to obtain a maximum of inexpensive feeds from each unit of land. This, in turn, is achieved by raising the most productive and effective feed crops; establishing an efficient ratio among them, depending on the farm's specialization; locating one crop or another in a justified way; and also selecting most economical feeds for preparation.

In keeping with the methods that have been developed and adopted in the republic, the accounting for the production of crop growing products is done in conventional units per one hectare of agricultural land. These conventional units correspond approximately to feed units. The average annual productivity of a hectare of land under the Tenth Five-Year Plan was 21.8 quintals of feed units, which is 7 percent more than the average for the Ninth Five-Year Plan.

In order to fulfill the assignments of the Eleventh Five-Year Plan for the sale of agricultural products and to provide animal husbandry with high-quality feeds, it is necessary to raise the overall level of productivity of feed crops to 3-3.2 thousand feed units per one hectare.

Agricultural workers of Lithuania are filled with resolve to make a worthy contribution to the implementation of the USSR food program and to carry out the tasks that have been set successfully.

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CSO: 1824/500

LIVESTOCK FEED PROCUREMENT

INTENSIFIED FEED PRODUCTION URGED FOR UKRAINIAN OBLAST

Kiev RADYANS'KA UKRAYINA in Ukrainian 5 Jun 82 p 2

[Article by I. Yarkovyy, first secretary of the Ternopol Oblast Committee of the Ukrainian Communist Party: "Masters of the Feed-Producing Field"]

[Text] The May Plenum of the CPSU Central Committee, which adopted the USSR Food Program running up to 1990, and a number of documents directed toward successful execution of this program, pointed out the highroad to further development of our agricultural production and of the entire agroindustrial complex. In particular, considerable attention was focused on further development of livestock raising. The present task is to ensure a transition everywhere to intensive methods of management of this branch and a substantial increase in productivity of all types of livestock and poultry.

In the years which have passed since the March (1965) CPSU Central Committee Plenum, a great deal has been accomplished for the growth and development of livestock raising in Ternopol Oblast. Only in the last decade have more than half of all capital allocations appropriated for agriculture in this oblast been spent on the needs of this branch. Many existing livestock operations have been renovated and large new livestock complexes have been built, conforming to the demands of advanced technology. We must acknowledge, however, that many of these milk and meat production operations have not reached designed output capacity. Why is this? The main reason is that they have lacked a reliable feed base.

The Central Committee of the Ukrainian Communist Party has correctly pointed out to us in the past deficiencies which have existed in organization of feed production.

One cannot state that the oblast party organization has not addressed problems of strengthening the feed base. They were discussed at meetings of the oblast committee bureau and party rayon committees, at oblast and rayon specialist conferences, at practical seminars, etc. And one would always hear the same thing: there is lacking a reliable practical subsoil -- assiduous execution of measures specified for improving feed production.

As was indicated by inquiries and a detailed analysis of the state of affairs locally, some party committees, kolkhoz and sovkhoz managers have failed to show persistence in implementing feed production methods which would satisfy

the requirements of livestock raising at its present level. For example, we recommended the establishment on all farms of the position of deputy kolkhoz chairman or sovkhoz director for feeds. Not everywhere, however, was this recommendation heeded. On many farms feed crop acreage was being ignored.

On the Kolkhoz imeni Radyans'ka Armiya in Kremenetskiy Rayon (it is headed by experienced manager M. K. Nykytyuk), the approach to this matter is quite different. For three years now feed production on this farm has been handled as a separate, independent branch. The structure of planted acreage here has been brought into conformity with the specialization of this farm, which is intensively developing livestock raising.

A special brigade, headed by deputy chairman M. H. Khudyko, is completely responsible for the feed base on the kolkhoz. The feed production workforce has entirely at its disposal the requisite machinery and other equipment and supplies. For this reason even last year they were able to reduce to a minimum the consequences of the adverse weather conditions and fully -- 42 quintals of feed units per standard head of stock -- supplied their livestock with coarse and succulent feeds.

Average annual milk production per hundred hectares for this kolkhoz during the 10th Five-Year Plan amounted to almost 700 quintals, and meat -- 20 quintals. Year after year this farm is overfulfilling its plan targets for production and sale to the state of livestock unit product, and is leading socialist competition among this oblast's stockmen.

Now that the food program specifies maximum strengthening of the feed base on kolkhozes and sovkhozes, the experience of such farms as the Kolkhoz imeni Radyans'ka Armiya will be of benefit to many farms. It is merely necessary that this experience and know-how be more assiduously studied and persistently adopted.

We are devoting particular attention to universal handling of feed production as a separate, specialized branch. Last winter the party oblast committee and rayon committees did a considerable amount of organizational work. They began with selection of personnel. At the recommendation of the oblast committee of the Ukrainian Communist Party, party rayon committees added the position of deputy kolkhoz chairman or sovkhoz director for feed production. The composition of these personnel was reviewed and strengthened. Farm chief furazhyry [feed specialists], as they are now called on the farms, underwent certification at the oblast agricultural administration. For the most part these are people with a specialized agricultural education and with practical work experience. Eighty percent of them are Communists.

All 369 farms in this oblast have formed combined feed production brigades, which have been assigned acreage for feed crops. They have been given equipment, which is in every case parked in especially assigned areas. Tractor brigade assistant brigade leaders for feed production equipment, positions which have been added to the kolkhoz and sovkhoz staff list, are responsible for prompt and high-quality equipment maintenance and operation. Feed preparation shops with all equipment, feed mixing areas, weighing equipment, buildings

for finish-drying and storing hay, and haylage-silage trenches have also been placed at the disposal of the specialized subdivisions. Seed, fertilizer, and herbicides have been allocated to the feed production brigades.

Each such brigade has teams for growing feed root crops, corn, for handling haylage, silage and feed beets, as well as carrots. All brigades have been assigned cost-accountability targets. The wages of persons engaged in feed production, as well as farm managers and specialists have been made directly dependent on the end result -- the harvest produced by the feed crop team and feed quality.

Quality, which becomes the basis for evaluating the performance of feed producers, is determined by rayon interfarm laboratories. Rayon seed-inspection and other laboratories are also being enlisted in this task. They are directed by a unified oblast feed quality control service. A check system of calculating and record keeping on feed acquisition and consumption for livestock is also being devised and adopted.

The advisability and opportuneness of designating feed production as a separate specialized branch was reaffirmed by this year's extraordinarily difficult weather conditions. A snowless winter and sharp temperature drops killed perennial grasses on 64 percent of acreage, that is, on almost 70,000 hectares. A substantial percentage of winter crops on feed acreage was also lost. Almost 40 percent of the winter rape crop was winter-killed. But feed production brigades, with their own equipment and skilled personnel, were able effectively to rectify the situation. They rapidly replanted in an organized manner, and now they are processing the feed crops.

In order for the renewed green conveyer to guarantee uninterrupted supply of feed to livestock in the summer period, mixes of annual grasses were planted at different times, with different ratios of constituents. All winter crops planted for green fodder, perennial grasses, meadows and pastures have received fertilizer applications. Considerable attention has been focused on after-mowing and afterharvest plantings.

Corn and feed beets play a special role in solving the feed problem. Special teams have been formed everywhere and the best farm machinery operators selected for growing these crops, with substantially increased acreages. Komsomol-youth teams have been assigned to care for corn being grown for grain. On 75 percent of total acreage, large-eared corn is being grown with efficient industrial techniques.

Root crops comprise 12 percent of the feed acreage in this oblast. These crops, just as sugar beets, are being grown with advanced techniques. According to preliminary calculations, this year 4-5 tons of root crops per cow will be produced.

Party, soviet and economic agencies in this oblast are directing the efforts of all agricultural workers toward ensuring that each and every feed-crop hectare yields a maximum return, so that there will be sufficient feed available both for communally-owned and privately-owned livestock.

The agricultural workers of Ternopol Oblast enthusiastically approve of the measures specified by the Food Program to provide livestock raising and feed production with machinery and equipment, which will comprise a unified technological complex for harvesting, preparing and distributing feed. This is an extremely necessary thing, particularly since the technological foundation of feed production on farms requires considerable improvement. It would be poor management, however, to wait for the state to provide kolkhozes and sovkhozes with the requisite aggregate of equipment. We must utilize that which we have in the most efficient manner.

Having substantially expanded planting of corn for green fodder, this oblast's farms saw that there would be a shortage of machinery for harvesting it. In order to solve the problem, farms made an inventory of all forage harvesters retired from service, in order to take two or three unserviceable units and make at least one working unit. Thus we are planning to reduce to a minimum the shortage of this equipment. We are compensating for a lack of certain other machinery with skilled maneuvering of equipment, by forming interfarm detachments, by shifting them from one kolkhoz or sovkhoz to another, etc.

At the same time a problem has been identified in this oblast which we are unable to solve on our own. The fact is that we do not have enough equipment for harvesting grain corn. With available equipment we can harvest perhaps one third of our grain corn. We cannot do the job without manual harvesting, and we are already making preparations for this.

Many years of observations indicate that there is considerable rainfall throughout practically all of Ternopol Oblast during the period of hay harvesting. In order to ensure a maximum harvest of this highly nutritious feed, we have decided to follow past farmer experience and final-dry our hay on special racks. The Prohres Kolkhoz in Zborovskiy Rayon was the first to begin building such racks. A seminar was held, at which officials from all rayons and farms were briefed on the construction of these simple devices. Presently every farm is building from 30 to 50 racks per hectare of hayfield.

The May CPSU Central Committee Plenum stated the task of extensive adoption of advanced feed storage techniques. We have already achieved certain success in this area. Practically all the silage and haylage this year will be stored in permanent-type structures.

Everybody realizes that it is important not only to have greater quantities of feeds but also to prepare them well for feeding to livestock. Feed preparation shops and feedlots are in operation on almost all livestock units on the farms of Ternopol Oblast. Interfarm feed mix plants are in operation, which will produce 270,000 tons of concentrated feeds this year. New enterprises of this type are being constructed in Zborov and Kozova. It is planned to build a feed mix plant in Kremenets. All these enterprises will have shops for the production of amidoconcentrate additives and granulated feeds, which will make it possible to protein-balance livestock feed rations. Sugar mills are doing a great deal to strengthen the feed base of our farms. Every sugar mill has equipment to mix molasses with carbamide, and pits have been dug for ensiling sugar beet residues.

In order for the forage crop base to meet the increased demands of today's livestock raising and to ensure further growth and development of this vitally important branch of agriculture, party organizations, rayon committees, and the party oblast committee are constantly concerned with strengthening grass-roots party organizational units in livestock raising. A total of 543 party groups have been formed in the most important focal areas of this branch, and 2705 Communists are at work.

This year our oblast's agricultural workers specified ambitious targets in the area of boosting livestock production. They pledged to sell the state 120,000 tons of meat -- more than 19 percent greater than last year, and 350,000 tons of milk -- 10.9 percent more than last year's figure, and to produce 126 quintals of meat and 410 quintals of milk per hundred hectares of farmland.

Reorganization of feed production and skilled management of this young branch of agriculture is an important prerequisite for successfully meeting the socialist pledges made by the stockmen of Ternopol Oblast in honor of the 60th anniversary of establishment of the USSR and to increase their contribution to implementation of the Food Program.

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CSO: 1811/48

LIVESTOCK FEED CROP SITUATION IN THE UKRAINE

Kiev SIL'S'KI VISTI in Ukrainian 8 Jul 82 pp 1, 3

[Text] Harvesting is in full swing now on the republic's farms. Kolkhozes and sovkhozes are completing the first mowing of sown and natural grasses, are procuring hay, early silage and dehydrated feed.

This year as of 5 July, 70 percent of natural and sown grasses were mowed, 2.3 million tons hay, 5.8 million tons haylage, 460,000 tons grass meal and other dehydrated feed were accumulated, and 3.5 million tons of silage mass was stored in trenches.

Forage supplies are taken care of wisely in kolkhozes and sovkhozes in Dnepropetrovskaya, Krymskaya and Kharkovskaya Oblasts, where they are procured by feed harvesting complexes. Here work pay is dependent not only on quantity but also on the quality of feed. Farms in these oblasts have already harvested 85-92 percent of their grasses and have more coarse feed than last year.

Not less than a ton of hay and grass chaff per cow! Feed provisioners in many kolkhozes and sovkhozes follow this motto now. Closest to the index are workers in Voroshilovgrad, Zakarpattya and Odessa areas.

Yet, an objective evaluation shows that on some farms grass mowing dates are delayed, there is a slow pace in hay, haylage, early silage, chaff and grass meal procurement since considerably less of the above was procured this year than last year.

The worst type of feed procurement is evident in Vinnitskaya, Kievskaya, Ternopol'skaya, Khmel'nitskaya and Chernigovskaya Oblasts. Here feed harvesting procedures were not included in a single technological complex, the group method of gathering grasses was not applied leading to delays in mowing which, in turn, affected the pace of coarse and succulent feed accumulation.

On farms in the above mentioned oblasts there is no system in feeding cattle with green mass at a time when most of it should be used for establishing reserves of coarse and succulent feed for the winter. Thus, in kolkhozes and sovkhozes of the Skvirskiy Rayon in the Kiev area of 6.4 thousand hectares grasses harvested during the first mowing, only 1.2 thousand hectares, or 21 percent, were used for hay and haylage, the rest was used for feeding animals. Only 11 percent of mowed grasses were utilized for accumulating coarse feed in the Stavishchenskiy Rayon of the same oblast.

In a number of oblasts where enough green mass is available, there is no concern for preparing grass meal, a valuable vitamin mixed feed component. Storage bins in kolkhozes and sovkhozes of Zakarpatskaya, Kirovogradskaya and Cherkasskaya Oblasts are being filled with it rather slowly. Drying units here operate during one shift only, the level of their technical servicing is low and consequently output per unit is almost twice lower than the average in the republic.

To obtain high quality feed, it is not only essential to accumulate them as quickly as possible, but progressive production technology with avoidance of nutrient losses has to be applied also. Unfortunately, these rules are not followed everywhere.

On a number of farms feed procurement procedures are violated; work pay is not dependent on feed nutritious value; there is no appropriate control by agrochemical and veterinary laboratories over adherence to feed production processes. Consequently, on farms in Khersonskaya Oblast 1800 tons of below grade silage mass and 160 tons of haylage mass have already been stored in trenches. Almost half of the grass meal checked in Nikolaevskaya Oblast is of poor quality. There is no real concern about this in kolkhozes of Kirovograd and Kiev area where delays occur in filling storage areas with raw material and in drying grass meal.

On many farms traditional hay drying methods are followed although nutrient losses under these circumstances, even when procurement procedures are fully adhered to, amount to more than 35 percent. Yet, additional drying of air-dried grass by active ventilation and accumulation of pressed hay decrease the losses by one and a half to two times. Farms in Volyn', Zhitomir, Ivano-Frankovsk, Khmel'nitskiy and Chernigov areas have acquired the least amount of hay through the active ventilation method.

In the second and third decades of June rainy weather accurred in most oblasts. It would have been appropriate at this time to adjust all drying units for chaff preparation, the value of which is well known. This was done, for example, in Kharkovskaya, Rovenskaya and a number of other oblasts. However, kolkhozes and sovkhozes in Ternopol' and Khmel'nitskiy areas underestimated the value of grass meal and at the beginning of the green harvest produced only 1.5-6 percent of the total amount of dehydrated feed. This is the result of an irresponsible approach by individual specialists and managers of farms and agricultural organs in the above mentioned oblasts towards fulfilling the complex feed production plan.

We must, therefore, improve matters. First of all, immediate steps must be taken to accelerate the gathering of sown and natural grasses, top dressing them, and, where possible, create an appropriate water and air soil regime to obtain a good second and following mowings.

In this year's conditions an important reserve in increasing succulent and green feed production should be provided by repeated feed crop sowing which should occupy at least 7 percent of dry land area, and 25-30 percent of arable land in irrigated areas. For replenishing reserves procurement of green mass even from wild growing grasses must also be considered.

As of 5 July feed procurement plan fulfillment by kolkhozes, sovkhozes, interfarm enterprises and other state farms may be described by the following indices (percentages of plan).

Oblasts	Natural & sown grasses mowed in first mowing	Hay	Haylage	Silage mass	Grass meal & other dry feed procured
Vinnitskaya	58	21	16	9	30
Volynskaya	72	49	53	3	23
Voroshilovgradskaya	82	90	76	-	45
Dnepropetrovskaya	92	62	108	2	66
Donetskaya	88	75	66	0.1	29
Zhitomirskaya	54	18	25	7	21
Zakarpatskaya	41	20	47	7	31
Zaporozhskaya	91	69	67	1	22
Ivano-Frankovskaya	55	11	26	18	24
Kievskaya	55	15	33	1	29
Kirovogradskaya	87	77	71	2	24
Krymskaya	85	75	83	17	29
Lvovskaya	64	31	34	14	43
Nikolaevskaya	81	37	82	7	25
Odesskaya	90	69	58	5	15
Poltavskaya	73	43	64	16	28
Rovenskaya	65	36	44	7	58
Sumskaya	53	17	60	5	38
Ternopol'skaya	49	32	21	10	24
Kharkovskaya	86	52	89	-	51
Khersonskaya	92	44	70	6	25
Khmel'nitskaya	50	9	14	3	30
Cherkasskaya	75	27	46	3	23
Chernovitskaya	61	19	40	4	24
Chernigovskaya	46	7	43	3	23

9443
CSO: 1811/47

FEED SITUATION IN THE UKRAINE

Kiev SIL'S'KI VISTI in Ukrainian 20 Jul 82 p 3

[Text] The fulfillment of measures anticipated in the May (1982) CC CPSU Plenum and the June (1982) CC Ukrainian Communist Party Plenum on the realization of the provisions program require that agricultural organs and all farm workers concentrate on the intensive factors in livestock raising development, on raising production effectiveness.

One of the urgent tasks is to achieve a marked increase in production output and its sale to the state already this year. It can be done if the favorable summer period is fully utilized, receiving maximum returns from green feed.

Considerable organizational work in successful conduct of cattle camp maintenance was achieved in Cherkasskaya and Krymskaya Oblasts. On farms in these oblasts timetables were made up for uninterrupted farm green mass arrival by months, decades and days. Feed is utilized rationally in the form of mixtures enriched with essential mineral additives. Rations are balanced not only according to general nutritiousness but also according to dry substances. Appropriate conditions for highly productive work have been created for farm workers. The results are noteworthy. In June the average daily weight increases in fattening cows in the above-mentioned oblasts amounted to 685-690 grams per head, 324-333 grams per hog. From each cow 279-312 kg milk were obtained and now the daily milking amount here is the highest in the oblasts, 9.2-10.5 kg per cow.

Yet, as indicated by a complete review of the course of summer camp cattle maintenance and feed procurement conducted by specialists from the Ministry of Agriculture Ukr SSR, in many oblasts, rayons and farms the possibilities for raising animal productivity are not fully utilized. Especially in Odesskaya, Kirovogradskaya, Nikolaevskaya, Chernovitskaya, Ternopol'skaya and Khmel'nitskaya Oblasts the milk yield per cow at the beginning of the summer period decreased by 5-15 percent and now the lowest amount from each is obtained here, 6.8-7.9 kg per cow; weight increases in raising and fattening cows and pigs have also decreased.

On a number of farms there are no objective reasons for this. In some animals are not fattened sufficiently because of interruptions in feed delivery, often less feed is received than anticipated in the determined feeding norms. A

considerable number of feed processing machines do not work, rations are not balanced according to nutritiousness, especially as to protein and dry substance content, mineral additives are missing.

Thus, in kolkhozes "Pyatyhir'ya," imeni Tretyy Internatsional in Lutuginskiy Rayon, Voroshilovgrad area, imeni Shevchenko in Apostolivskiy Rayon, Dnepropetrovsk area, during June and July mostly green feed arrived on farms in amounts which were one and a half to two times lower than foreseen in the daily ration norm. There are great feed losses here during transport and feeding. Therefore, cow productivity is low, 1, 1-1.4 kg less than last year during this period.

Lowering of animal productivity is also caused by the fact that on many farms and summer camps there is an insufficient number of permanent livestock growers, the daily routine is not followed, technological processes are violated, premature cow milking stoppage is allowed. These are not isolated facts on farms in Sumskaya, Kharkovskaya, Vinnitskaya, Zhitomirskaya, Donetskaya and a number of other oblasts. At the kolkhoz imeni Zhdanov in Novovodolazskiy Rayon, Kharkov area, for example, the number of cows assigned to each milkmaid was doubled, but no changes were made in worker responsibility and in work organization. Feeding and milking procedure violations are, therefore, allowed and today only 6 kg milk are obtained from each cow daily.

There are quite a few shortcomings in pedigree work, livestock renewal, raising renewal young stock on farms in Voroshilovgradskaya, Volynskaya, Dnepropetrovskaya, Poltavskaya, Chernigovskaya and a number of other oblasts.

Reserves for increasing meat production on specialized farms are not utilized especially in raising and fattening cows and pigs. The capabilities of most complexes are not fully developed and do not operate rhythmically. At the kolkhoz "Peremoha" in Krasnoarmiyskiy Rayon, Donetskaya Oblast, for example, at the complex for beef production where 4.7 thousand animals are maintained, at the beginning of the year the daily weight increase per animal did not go above 259 grams. In the summer it is also low because of insufficient control over ration adherence. Each animal should be fed 25 kg of green mass daily, but only 13-18 kg are received.

Measures taken to develop hog breeding are unsatisfactory, the intensity of using primary sows remains low, there are deaths among newly born piglets. This applies first of all to farms in Odesskaya, Nikolaevskaya, Ternopol'skaya, Khmel'nitskaya, Lvovskaya, Khersonskaya and some other oblasts.

The feed basis and an organized feed procurement are of primary importance in providing a steady increase in the production of farm output both now and in the future. The most success is achieved on farms where harvesting-transport complexes, detachments and teams are used. This is how work was organized in the Dnepropetrovsk area. They have almost finished gathering sown and natural grasses from the first mowing, the accumulation of coarse feed has increased, haylage has already been put up as planned and the highest amount of anticipated dehydrated feed has been prepared here also.

Yet, in a number of kolkhozes and sovkhozes in Vinnitskaya, Zhitomirskaya, Zakarpatskaya, Kievskaya, Sumskaya, Khmel'nitskaya and Chernigovskaya Oblasts this work is delayed, grasses are spoiled by long standing, losing their quality and feed procurement procedures are violated. Quite a number of drying units AVM-0.65, SB-1.5 do not operate at full capacity, the mass is often burned on them and poor quality production is obtained. There are many of these farms especially in Lvov, Volyn, Kirovograd and Nilolaev areas.

Therefore, managers, agricultural administration and farm specialists, farm and complex workers must take urgent steps to correct the situation, making practical contributions towards increasing the production pace of meat, milk and other output.

To prevent feed wastefulness, it is very important to arrange for their effective use in the form of green and coarse mixtures, enriched with mineral additives.

Detachments and teams responsible for the production, procurement and preparation of feed for feeding should furnish an uninterrupted supply of green mass and mixed feed to farms and summer camps for morning, noon and evening rations.

We have to provide for correct utilization of crop pastures, introduce pen herding in small groups with the assistance of electrical shepherds and portion feeding (or mowing) of grass according to the principle: Fresh feed every day, removal of grass remains, nourishment and, if possible, also watering. It is useful to herd cattle at night.

In dairy livestock raising attention should be given first of all to organization improvement in raising renewal heifers on all farms regardless of their specialization, determination of the optimal parameters of their development, preventing low productivity firstlings from entering the basic herd.

For increased meat production intensive animal fattening must be expanded, groups must be arranged by weight categories, each must be assigned goals for weight gain with consideration of intensity and fattening dates, and their realization in increased live weight.

Equally important tasks must be solved in hog breeding. The mother livestock must be checked, animals unsuitable for reproduction should be set aside, increasing the number of renewal and those pigs which are being checked up to 2-2.5 heads for each primary sow, mating them early. Livestock summer camp maintenance should be practiced widely. At least two tons mixed silage and a ton of barley should be procured for each sow.

On farms and all enterprises of the agro-industrial complex personnel responsibility should be raised for providing promising forage supplies for livestock growing, completing the separation of feed production into a separate branch, accelerating the pace of feed procurement, finish grass mowing, prevent procurement procedure violations and losses and improving the quality of hay, haylage, silage and grass meal.

Already at this time work should be started on preparing the farms for winter, schedules should be made out for the repair of all animal shelters, mechanization means and feed processing objects in order to complete this work by October 1. Care should be taken for the equipment of forage yards, feed lots near shelters and delivery of essential feed supplies to farms.

Successful summer livestock maintenance and timely procurement of sufficient feed supplies are dependent on worker discipline and skill on farms and in the field, their feeling of responsibility for the task assigned to them, and moral and material interest in the final result.

Raising the level of organizational and educational work, developing an active socialist competition, utilizing reserves and possibilities for increasing the production of livestock raising output as fully as possible--these are urgent tasks facing agricultural organs and farm managers and specialists.

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CSO: 1811/55

LIVESTOCK FEED PROCUREMENT

GREEN HARVEST TEMPO REPORTED

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 21 Jul 82 p 1

[Article: "The Green Harvest Speeds Up"]

[Text] The task for the third week of hay procurement work has been fulfilled in Aktyubinskaya, Vostochno-Kazakhstanskaya and Mangyshlakskaya Oblasts and that for the laying in of haylage -- in Vostochno-Kazakhstanskaya, Dzhambulskaya and Kokchetavskaya Oblasts. The farms in Vostochno-Kazakhstanskaya Oblast provide a fine example of stable operations. Along streams, cut-off lakes and in run-off areas for flow waters, they built hundreds of dams, laid out pipelines and organized irrigation for 50,000 hectares of sowings of wheat grass, awnless brome

Fulfillment of Tasks of Monthly Campaign for Feed Procurement From 12 To 18 July (in percentages)

Oblasts	Hay	Haylage	Vitamin Meal
Aktyubinskaya	106	74	50
Alma-Atinskaya	75	76	60
Vostochno-Kazakhstanskaya	139	131	95
Gur'yevskaya	92	28	-
Dzhambulskaya	62	194	50
Dzhezkazganskaya	82	47	-
Karagandinskaya	33	15	38
Kzyl-Ordinskaya	88	21	-
Kokchetavskaya	74	255	120
Kustanayskaya	78	82	110
Mangyshlakskaya	167	-	-
Pavlodarskaya	82	65	75
Severo-Kazakhstanskaya	64	-	200
Semipalatinskaya	78	28	120
Taldy-Kurganskaya	83	57	60
Turgayskaya	75	30	50
Ural'skaya	99.9	42	5
Tselinogradskaya	64	-	110
Chimkentskaya	64	24	48
For the Kazakh SSR	80	65	70

grass and alfalfa. This made it possible to triple their productivity compared to non-irrigated sowings. Opportunities for accelerating the procurement of feed are also to be found in the other oblasts. In Semipalatinskaya and Pavlodarskaya Oblasts the grasses on the bottom lands of the Irtysh River have ripened. The farms are moving their haying units out onto them. The harvesting of perennial grasses is nearing completion on sovkhozes and kolkhozes in the virgin land areas and the harvesting of annual grasses is approaching. The harvesting of grasses in almost inaccessible regions -- on mountains, around lakes, in forests and the procurement of common reeds should be organized on an extensive scale in all areas. Forty percent of the traditional haying lands have still not been mown. Irrigated lands constitute the principal source for procuring feed in the southern regions. However their productivity is not very high on many farms. At the same time, the leading sovkhozes and kolkhozes in Chimkentskaya and Dzhambulskaya Oblasts have already obtained 80 or more quintals of hay per hectare from such plantations. The Kustanayskaya Oblast feed procurement specialists have already completed 71 percent of their hay procurement plan. The workers in Chimkentskaya Oblast have laid away two thirds of the required hay and those in Kzyl-Ordinskaya Oblast -- more than one half of the task. Approximately 6.2 million tons of hay have been procured throughout the republic -- 40 percent of the plan, haylage -- somewhat more than one half of the planned amount and vitamin meal -- approximately 30 percent of the plan.

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LIVESTOCK FEED PROCUREMENT FULFILLED

FEED PROCUREMENT CAMPAIGN FULFILLED

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 16 Jul 82 p 1

[Article: "Results of the Second Week"]

[Text] The second week of a month's campaign to procure feed has been completed. The results reveal that in some oblasts, where all resources were mobilized in behalf of the green harvest and use was made of the available reserves, the tasks for accumulating feed were fulfilled and over-fulfilled. Yet in other oblasts the work was carried out slowly. The farms in a majority of the northern oblasts, the sovkhozes and kolkhozes in Vostochno-Kazakhstanskaya, Aktyubinskaya, Dzhezkazganskaya and Mangyshlakskaya Oblasts are deserving of praise for having exceeded their hay procurement tasks for the second week in a row. The rates for accumulating feed on farms in Semipalatinskaya Oblast have also increased.

Fulfillment of Tasks of Monthly Campaign For Feed Procurements From 5 To 11 July (in percentages)

Oblasts	Hay	Haylage	Vitamin Meal
Aktyubinskaya	115	23	10
Alma-Atinskaya	51	95	50
Vostochno Kazakhstanskaya	154	106	115
Gur'yevskaya	71	-	-
Dzhambulskaya	59	210	50
Dzhezkazganskaya	104	90	-
Karagandinskaya	73	30	40
Kzyl-Ordinskaya	96	36	-
Kokchetavskaya	101	80	120
Kustanayskaya	109	62	160
Mangyshlakskaya	133	-	-
Pavlodarskaya	133	60	100
Severo-Kazakhstanskaya	103	-	220
Semipalatinskaya	117	28	50
Taldy-Kurganskaya	85	65	50
Turgayskaya	87	90	57
Ural'skaya	90	21	-
Tselinogradskaya	82	-	-
Chimkentskaya	41	-	50
For the Kazakh SSR	92	68	77

As a rule, the grass here is mown here in all areas where it is found growing. The manual harvesting of grasses has been organized on unsuitable lands, in gullies and ravines. The grass in mountainous areas in Vostochno-Kazakhstanskaya Oblast is being cut down and ramal feed is being procured. Coarse stalk grass and underbrush are being processed into granules and briquettes. The feed procurement rates in Alma-Atinskaya, Dzhambulskaya and Chimkentskaya Oblasts are low. Chimkentskaya Oblast, which commenced its green harvest work earlier than the others, is presently being overtaken in its hay procurement operations by the feed procurement specialists in Kustanayskaya and Kzyl-Ordinskaya Oblasts. Reserves are available on each farm for augmenting the supplies of hay, haylage and vitamin meal. The republic's workers have completed harvesting only one half of their haying lands. Approximately 4.9 million tons of hay have been procured -- 32 percent of the task and more than 1.2 million tons of haylage -- 45 percent of the figure planned

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BRIEFS

LOW GRASS YIELDS--Chingirlauskiy Rayon, Ural'skaya Oblast--The cropping power of the grasses is not very high this year. A high level of labor organization and a creative approach for solving the assigned tasks are required if the planned quantity of feed is to be procured. We are striving to move out onto the fields earlier and to return later to the field camp. A well organized technical support service is aiding us in achieving a high operational reliability for our machines. The machine operators are losing no time in carrying out the technical servicing and refueling of their tractors. This work is being carried out directly out on the tillage plots. A unit for sharpening and repairing the mowing units is in continuous operation. Harmonious work on the part of all teams participating in the hay harvesting operations will make it possible to create a large supply of coarse feed. /by K. Ismagulov/ /Excerpt/ /Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 9 Jul 82 p 1/ 7026

WINTER FEED STORAGE OPERATIONS--Semipalatinskaya Oblast-- Summer this year in the Makanchinskiy Steppe region turned out to be very dry. But the workers at the Arkaldinskiy Sovkhoz have learned how to create a reliable supply of feed under all types of climatic conditions. Although the green harvest has only commenced, the farm has already reported fulfillment of the annual plan for laying in haylage. Two thousand tons of nutritional feed have been laid away for the coming winter. The plans call for 3,000 more tons of haylage to be placed in trenches. This year, for the very first time, 18,500 tons of silage will be procured. Towards this end, the sowing area for corn has been expanded by one third. This crop will be grown under irrigation conditions on 1,300 hectares. Many corn growers have resolved to exceed their planned cropping power by a factor of 1.5-2. /by B. Beysenov/ /Excerpts/ /Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 10 Jul 82 p 1/ 7026

MORE CULTIVATED PASTURES--Chimkent--The Zadar'inskiy State Breeding Plant has completed transferring its sheep over to the summer pastures. For the very first time, almost one half of the animals are located in the vicinity of the central farmstead, on fenced-in cultivated pastures. Prostrate summer cypress, winterfat and other drought-resistant wild grasses having different growing seasons have been sown on 9,000 hectares. Each field is divided into sectors by means of strips of black saxaul, the branches of which are also readily consumed by the sheep. These lands furnish up to 20 or more quintals of dry bulk per hectare -- 10-12 times more than that obtained from conventional lands. Thirty karakul raising farms in Chimkentskaya, Kzyl-Ordinskaya, Gur'yevskaya, Mangyshlakskaya and other oblasts have commenced creating cultivated pastures. These highly productive plots occupy 30,000 hectares of what was earlier barren tracts of land. /Text/ /Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 8 Jul 82 p 1/ 7026

HAYING OBLIGATIONS--Severo-Kazakhstanskaya Oblast--In order to create a satisfying wintering period for the livestock, the rayon must procure 198,000 tons of feed units. The plan is a tense but realistic one and we will carry it out.. Such was the statement made by the chief agronomist of the rayon agricultural administration Vasiliy Rzhevskiy. The rain which fell has accelerated the growth of the grasses. However, in some rayons -- Sokolovskiy, Vozvyshenskiy, Mamlyutskiy and Dzhambulskiy -- the haying work is being carried out at a slow tempo. In some areas it is hoped that the grasses will continue to grow and that more fodder will become available. In the opinion of the specialists, this is clearly an erroneous position. One peculiarity of the present grass stand is that cereal types of grass predominate in it. If they are not cut down in a timely manner, a considerable quantity of nutrients will be lost. Yes and the late harvesting periods for the grasses preclude the possibility of obtaining good aftergrowth. The haying operations in the oblast are increasing in intensity. More than 200 mechanized grass harvesting complexes have moved out onto the meadows. One hundred and ten units for the production of vitamin grass meal and powerful haying equipment are in operation on the farms. The volume of work to be carried out is great. The grass must be harvested from an area of approximately 1 million hectares and 415,000 tons of hay, 36,500 tons of grass meal and a considerable quantity of other dehydrated feeds procured. In addition, 500,000 tons of haylage and 2.8 million tons of silage must be placed in storage. These high obligations are well-founded and they are being reinforced by specific actions. /by A. Raysh/ /Excerpts/ /Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 21 Jul 82 p 1/ 7026

LIVESTOCK

IMPROVING CAPITAL INVESTMENT EFFICIENCY IN ANIMAL HUSBANDRY

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 7, Jul 82 pp 63-64

[Article by Vasiliy Mikhaylovich Rabshtyna, candidate of economic sciences, laboratory chief of TsNIPTIMEZh; Viktor Ivanovich Sotnikov, candidate of economic sciences, senior scientific worker of TsNIPTIMEZh; and Aleksey Grigor'yevich Shugalka, candidate of economic sciences, senior scientific worker of TsNIPTIMEZh: "Utilizing Capital Investments in Animal Husbandry More Efficiently"]

[Text] The food program that was approved by the May (1982) Plenum of the CPSU Central Committee emphasizes that ". . . party, soviet and agricultural agencies, kolkhozes and sovkhozes, concerned about increasing and maintaining the number of head of livestock, must provide for a changeover everywhere to intensive methods of animal husbandry and a significant increase in the productivity of all kinds of cattle and poultry." Carrying out this task will depend largely on the efficiency of the utilization of the large amounts of money that are allotted for the development of animal husbandry.

An analysis of the utilization of capital investments in animal husbandry during 1976-1980 shows the serious organizational and economic shortcomings, whose elimination will make it possible to significantly increase the efficiency of the invested funds. The numerous organizations with inadequate production capacities that are carrying out construction and assembly work in animal husbandry are first to draw attention to themselves. For example, in Nikolayevskaya Oblast in the Ukrainian SSR the construction and assembly work in animal husbandry of the kolkhozes is done by ten organizations. Of the capital investments that are allotted, 51.8 percent are assimilated by enterprises of the oblast interkolkhoz construction organization, 28.7 percent--by the farms themselves and 19.5 percent--by 8 other construction and assembly organizations.

The inadequate coordination of the work of the numerous construction organizations leads to prolongation of the time periods for putting the production facilities into operation. Thus in 1976 in Novoodesskiy Rayon in Nikolayevskaya Oblast 92.7 percent of the fixed capital was put into operation, in 1977--83.6 percent and in 1978--57.9 percent.

The regular underfulfillment of plans for the startup of fixed capital is, to a significant degree, the result of dispersion of construction capacities among

various projects within the administration rayon. Thus in 1980 the Novoodesskiy interkolkhoz construction organization worked on projects on ten kolkhozes. Additionally, work was done for reconstructing the poultry facilities of Kolkhozptitseprom. Such a dispersion of the capacities utilized by construction organizations leads to a prolongation of the time periods for the construction and startup of animal husbandry facilities. There are now five large projects under construction on the kolkhozes: sheep raising farms to accomodate 5,000 and 6,000 ewes (estimated cost--2.3 million rubles), a dairy farm for 1,200 cows (2.5 million rubles), a farm for fattening large horned cattle that will accomodate 3,200 (more than 2 million rubles), and a dairy farm for 800 cows (1.8 million rubles). But capital investments are not being concentrated on these projects in order to complete them as rapidly as possible. As a result, the construction of these projects is prolonged for five years and more instead of the normative 2-3 years.

For example, on the Leninskaya iskra Kolkhoz the construction of a farm for fattening 3,200 head of large horned cattle was begun in 1975, and it is not planned to complete it until this year. Moreover the construction organizations are trying to put fixed production facilities into operation (cow stables, sheep yards and so forth) by indefinitely putting off the construction of the auxiliary facilities for the complex (feed shops, boilers, building up of the territory and so forth). For example, on this Leninskaya iskra Kolkhoz in 1976-1977 they put facilities for fattening large horned cattle into operation. But up to now they are still constructing the manure storehouse, the boiler and the heating system, and they have still not landscaped the territory. One the Kolkhoz imeni Frunze premises for 1,200 cows were put into operation in 1976-1977, but the boiler and the running water facilities are still being constructed.

On certain farms of the Ukraine the volumes of incomplete construction exceed the normative 1.5-2.5-fold, and the absolute sum of them is equal to or more than the annual volume of capital investments.

All this determines the critical need to concentrate capacities and centralize administration of construction organizations, which will make it possible to utilize capital investments expediently and within the optimal time periods.

In large agricultural construction associations with an annual volume of work of about 15 million rubles, it is expedient to increase the annual volume of work of the mobile mechanized columns to 2-4 million rubles. The highest indicators are achieved by mobile mechanized columns with annual work volumes of 2.8-2.5 million rubles, and their construction sites--180,000-250,000 rubles. This is because of the fact that with these volumes it is possible to utilize effectively the progressive form of organization in construction work--the brigade contract. Thus in the Donetskaya Oblast interkolkhoz construction organization in 1980 41 brigades including 766 people worked according to the brigade contract method, and they assimilated 42 percent of the overall volume of construction and assembly work of the associations. The annual output per worker was 27 percent greater than the average for the oblast interkolkhoz construction organization. The construction workers reduced labor expenditures by 1,729,000 man-hours as compared to the plan, which is tantamount to releasing 94 annual workers.

The creation of large, centrally administrated, maneuverable construction and installation organizations makes it possible to improve the planning of the utilization of capital investments, taking the needs of animal husbandry into account, and not the existing capacities of the construction organizations of a specific administrative rayon, which is the case at the present time.

Thus in 1976, with an average volume of planned construction and installation work of 57.3 rubles per conventional head in Kirovogradskaya Oblast, and Golovanevskiy, Dolinskiy and Ustinovskiy rayons, where 12.6 percent of the animals are concentrated, these expenditures amounted to 81-93 rubles, and in Znamenskiy, Dobrovelichkovskiy and Vol'shanskiy rayons, where 14.8 percent of the animals are concentrated, these amounts were only 33.3-41.6 rubles.

Planning the volumes of capital investments and construction and installation work not according to the need for startup of facilities, but according to the capacities of construction organizations located in one administrative rayon or another, leads to a situation where the capabilities of the farms for constructing animal husbandry facilities are not utilized.

In 1976-1980 construction organizations of the Nikolayevskaya interkolkhoz construction organization included in the plans for capital construction only 89 percent of the volumes of capital construction proposed by the kolkhozes, and the Nikolayevsel'stroy trust included only 55.7 percent of these volumes. But even these volumes of capital construction remain unfulfilled each year. In 1979 the oblast interkolkhoz construction organizations fulfilled the plan for capital construction by 84.5 percent, and the Nikolayevsel'stroy trust--by only 50 percent.

All this forces the farms to increase the volume of construction that is done through their own resources. Thus the amount of capital construction by this method increases 1.2-1.7-fold each year.

The proportion of capital investments in animal husbandry that is used for reconstructing farms is very low. Yet in a number of cases these capital investments would provide a maximum economic effect through improving the existing material and technical base. One example is sufficient. In 1971-1975 the kolkhozes of Nikolayevskaya Oblast failed to use 6 percent of the calf pens and 12 percent of the cow stables for their direct purpose since the capacities they had were greater than the number of large horned cattle. In value terms the volume of "frozen" capital investments amounted to 25.1 million rubles. Nonetheless in 1976-1980 the oblast constructed 234 facilities for large horned cattle, including 121 cow stables (to accomodate 28,000 cows), 67 calf pens (to accomodate 33,600 calves), and 46 premises for fattening cattle (to accomodate 29,600) with a book value of more than 60 million rubles. Such an approach to the utilization of capital investments undoubtedly fails to create the necessary conditions for increasing the output-capital ratio and reducing the time periods for recouping capital investments.

At the same time the majority of tasks for the development of cattle raising could be carried out through reconstruction of existing facilities with considerably less expenditures. Thus on the Mayak and Oktyabr' kolkhozes in Znamenskiy Rayon in Kirovogradskaya Oblast the value of accomodations for animals in newly constructed

calf pens amounted to 512.2 and 700 rubles, and in reconstructed facilities--350 rubles. Moreover, the additional capital investments in the reconstruction of facilities for one animal did not exceed 125 rubles. Additionally, this rayon is reconstructing not farms and complexes, but individual facilities. Expenditures on their reconstruction do not exceed 20 percent of the overall capital investments in animal husbandry.

In addition to the aforementioned factors, the failure to fulfill plans for construction and assembly work are brought about by the inadequate labor force of construction organizations, the low level of work for providing machines, equipment and energy for labor, and the unsatisfactory supply of the basic construction materials.

The prolongation of the time periods for the assimilation of capital investments and the concomitant reduction of the level of the output-capital ratio are exacerbated by the satisfactory provision of agricultural equipment for animal husbandry. Sets of machines and equipment are delivered promptly in batches only to newly constructed animal husbandry facilities. And for facilities that are being reconstructed the technical equipment is not delivered in sets and it is not delivered promptly, and the orders for it are regularly unfilled. But in 1976-1980 the orders from the kolkhozes of Kirovogradskaya Oblast for KTU-10 feed distributors were filled by 27.5 percent, KUT-ZA--by 8.2 percent, S-7 mixers--by 41 percent, KV-300 boilers--by 35.8 percent, TSN-2 transporters--by 10.3 percent, and TSN-3 and OB--by 41 percent.

The volumes of capital investments for 1981-1985 were planned without taking these shortcomings into account. Therefore even in the stage of planning there was significant economic harm because of inefficient utilization of capital investments. Thus on the kolkhozes of Novoodesskiy Rayon the overall volume of capital investments envisioned by the plan for the Eleventh Five-Year Plan amount to 55.2 million rubles, including 43.2 million rubles for construction and installation work. Of the 31.5 million rubles intended for the construction of animal husbandry facilities, 5.4 million rubles are to be spent for the construction of complexes and large animal husbandry farms. On the Put'k kommunizmu Kolkhoz for a dairy complex with 1,200 cows, in 1985 one facility will be constructed for 472 head. On the Kolkhoz imeni Frunze on the farm for raising 3,000 head of non-calving young cows it is planned to construct three facilities for 753 head in 1983 and two facilities for 1,441 head in 1984. For the construction of individual animal husbandry premises they are allotting 775,000 rubles and shops for preparing mixed feeds--56,400 rubles. They are allotting 16.4 million rubles for the construction of silage storage facilities.

Of the overall amount of work envisioned by the plan, 44.2 percent will be carried out by the oblast interkolkhoz construction organization, 7.1 percent through the resources of the farms and 48.7 percent by other organizations.

In other words, they are proposing the presently existing organizational and economic structure for construction organizations. Yet there is no doubt that a sharp reduction in the number of newly started construction projects would contribute to reducing the volume of incomplete construction.

In order to improve the utilization of capital investments, it is necessary to concentrate the capacities of construction and installation organizations and centralize their administration, to reduce the number of newly started construction projects, to reduce the volumes of incomplete construction to the normative in the shortest period of time, and to provide consistently for an optimal combination of new construction and reconstruction of animal husbandry facilities.

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CSO: 1824/517

USE OF FIXED PRODUCTION CAPITAL IN BEEF CATTLE HUSBANDRY

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 7, Jul 82 pp 65-66

[Article by I. Soldatov, candidate of economic sciences, director of the VNIIPiN of the USSR Ministry of Agriculture, and V. Kuznetsov, division manager of the VNIIPiN of the USSR Ministry of Agriculture: "Utilization of Fixed Capital in Beef Raising"]

[Text] Rostovskaya Oblast is one of the largest zones for meat cattle raising. The oblast occupies one of the leading positions in the Russian Federation in terms of the number of meat cattle (19 percent of the overall number of cows of meat breeds in the RSFSR). Under the Tenth Five-Year Plan the average annual beef production on the kolkhozes and sovkhozes reached 187,200 tons, or increased by 19 percent as compared to the Ninth Five-Year Plan. Beef comprises 49 percent of the overall volume of meat production.

The production of high-quality beef and heavy leather raw material and more efficient utilization of coarse feeds, especially on sovkhozes that raise cattle and grain, requires more intensive development of meat cattle raising. But the potential capabilities of this branch are far from being fully utilized.

The research we conducted shows that the efficiency of the branch depends mainly on the level of capital availability, the structure of the funds, the supply of circulating capital, concentration of production, specialization of enterprises and the condition of the feed base.

The cattle and grain sovkhozes of the Rostovskotoprom association, which specializes in the production of meat products, were grouped according to the level of development of the branch, depending on capital availability. The data from the grouping showed that as capital availability increases, so do labor productivity and the production of products per conventional head of livestock, and other economic indicators also improve.

The results of the correlational analysis we did show a high level of availability of fixed capital and its efficient utilization exert a decisive influence on the final results of production.

The research showed that, because of various factors, there are unjustifiable differences in the supply of fixed capital among the cattle and grain sovkhozes,

which undoubtedly reduces the effectiveness of the branch as a whole. Thus the supply of fixed capital per cow of a meat breed ranges from 326 to 2,042 rubles on the various sovkhozes. The large farms have the worst capital availability. The level of capital availability for meat cattle raising that has been achieved on many sovkhozes of the Rostovskotoprom association is still inadequate. Thus, according to the results of a regression analysis, cattle and grain sovkhozes must have 31,400 rubles' worth of fixed production capital per 100 hectares of conventional arable land, but the actual average provision of capital amounts to only 9,900 rubles. And only individual farms have indicators that are close to the calculated ones.

Moreover, the effectiveness of the utilization of fixed production capital for agricultural purposes, especially productive livestock, remains lower than is expected. Thus, according to the results of a regression analysis, a one-ruble increase in the value of productive livestock should be accompanied by an increase in the gross output of meat cattle raising of 1.21 rubles. Calculations show that with this ratio between the increased capital and the value of products on cattle and grain sovkhozes, the increased gross output from cattle raising during the years of the Tenth Five-Year Plan should have been 14.5 million rubles. The actual increase was only 3.1 million rubles.

All this demonstrates the need to develop and implement a complex of measures which would make it possible not to achieve an increase in the effectiveness of individual kinds of expenditures, but an increase in the total effectiveness of all factors of production.

Practice shows that the proper attention is not being devoted to questions of planning and norm setting for the utilization of fixed capital in agriculture. In our opinion, it would be expedient to envision in the production and financial plans of the kolkhozes and sovkhozes indicators which characterize the level of provision and utilization of fixed capital, both on the farm as a whole and among the various branches.

As analysis shows, in meat cattle raising the effectiveness of the utilization of fixed capital is conditioned largely by its structure. It should be noted that in the past ten years the structure of fixed capital for meat cattle raising has undergone essential changes. Thus the proportion of buildings and structures increased from 50.3 to 56.4 percent, productive livestock--from 16.2 percent to 17.7 percent, and high-powered working machines and equipment decreased from 22.3 percent to 19 percent, including means of transportation--from 4.9 percent to 3.6 percent.

Through statistical grouping, the study of monographs and special investigations of cattle and grain sovkhozes it has been established that fixed capital is utilized most efficiently in meat cattle raising with the following structure: buildings, structures and transfer devices--51-54 percent, machines, equipment and means of transportation--29-31 percent, and productive livestock--17-19 percent.

Fixed capital is utilized much more effectively in meat cattle raising with an optimal ratio between it and circulating capital. The work experience of the leading farms confirms that for cattle and grain sovkhozes in Rostovskaya Oblast, which

specializes in the production of meat products, the most acceptable ratio is one where there are 60-70 kopecks of circulating capital for every one ruble of fixed capital.

The utilization of fixed production capital in meat cattle raising can be improved through deepening specialization, concentrating production and developing interfarm cooperation.

Research has shown that on sovkhozes that have an average of 65 conventional head of livestock per 100 hectares of arable land, labor productivity increases 2.5-fold and output-capital ratio--1.2-fold as compared to farms where the average density of livestock is 28 conventional head, and concentration of production has a marked influence on the effectiveness of the utilization of fixed capital even without deep qualitative changes in the specialization of the enterprise. This is confirmed by the corresponding grouping of the kolkhozes of the Rostovskaya Oblast. Thus about 28 percent of all the head of large horned cattle are concentrated in group I of the farms, which includes 128 kolkhozes or 38 percent of the farms engaged in the production of commercial products (beef), and they produce only 22 percent of the gross increase in live weight. The farms of this group have five-thirteenths the number of livestock that are in group V. The production cost of one quintal of gain of live weight is 52.9 percent greater than on the kolkhozes of group V, and 18.5 percent greater than in the Rostovkotoprom association as a whole. Labor expenditures are three times greater and the feed expended per one quintal of gain of live weight is 1.4 times greater than on specialized sovkhozes.

And on kolkhozes of group V, which produce an average of 6,900 quintals of gain of live weight of large horned cattle and have more than 7,000 head of livestock, the cost of one quintal of gain of live weight is 134.8 rubles, labor expenditures--36.3 man-hours, and feed expenditures--11.8 quintals of feed units.

On cattle and grain sovkhozes of the Rostovskotoprom association which have a high level of specialization (more than 60 percent), the production of the gross output per conventional head of livestock is 61 percent greater, feed expenditures per one quintal of gain of live weight--7 percent less, the proportional capital-output ratio—32 percent less, and the production cost of a unit of output--26 percent less than on the sovkhozes where the level of specialization in meat cattle raising does not exceed 30 percent.

The process of deepening specialization and concentration on the basis of interfarm cooperation creates real conditions for increasing the effectiveness of the raising of meat cattle and utilization of fixed production capital. Thus on interfarm enterprises for completing the raising and fattening of large horned cattle in Rostovskaya Oblast on an average for 1976-1980, the live weight of one head sold to the state was 400 kilograms, the average daily weight gain--664 grams, feed expenditures per one quintal of weight gain--11.2 quintals of feed units, labor expenditures--7.6 man-hours, and production costs--146 rubles.

At the present time the fattening of large horned cattle on fattening areas is becoming widespread. Industrial technology for fattening livestock makes it possible to obtain inexpensive beef on the basis of a high level of mechanization of production processes. This is shown by the work experience of the Bratskaya,

Proletarskaya and Veselovskaya fattening areas in Rostovskaya Oblast, which receive 20,000 head at one time.

Thus at the Bratskaya fattening area in Martynovskiy Rayon in Rostovskaya Oblast, on an average for 1976-1980, the live weight of one head of large horned cattle taken from fattening was 451 kilograms, labor expenditures on one kilogram of gain of live weight--1.3 man-hours, feed expenditures--8.7 quintals of feed units, and production costs--128 rubles 65 kopecks.

Scientific and economic experiments conducted at the Bratskaya area showed that fattening cattle in open areas that have three walls (a roof over the feeder, a wall along the feeder and a wind protection wall) provides high economic effectiveness.

Many years of experience in providing feed for large animal husbandry complexes and fattening areas shows that the existing practice of delivering feeds by farms that are participating in cooperation is imperfect. These farms, having their own animal husbandry, are primarily concerned about providing their own animals with feeds. And, as a rule, they do not deliver to the interfarm enterprise those feeds which it needs in terms of technology, but those which are in abundance on the farms.

Because of the large scale of production at interfarm enterprises, and also taking into account the rhythmic and flowline nature of their work, it seems expedient to create special farms for producing feeds for them. The experience of a number of oblasts of the RSFSR confirms the practical significance and the economic expediency of creating specialized feed production.

Efficient utilization of productive livestock is extremely important in solving the problem of increasing the effectiveness of fixed capital in meat cattle raising. But in recent years, while expenditures on maintaining the reproductive animals have increased, their productivity has decreased significantly, which has led to a reduction in the effectiveness of cattle raising as a whole.

Thus during the period of the utilization of the meat cow the value of the products produced, taking into account earnings from the sale of the cow, amounts to 1,600-1,800 rubles, and expenditures on maintaining it--2,100-2,400 rubles. Consequently, in order to increase the effectiveness of the branch, it is necessary to achieve an all-around reduction of labor expenditures and money on maintaining the reproductive animals, with a simultaneous increase in the output of calves and an increase in the weaning weight.

Our calculations show that under the conditions of Rostovskaya Oblast, profitable (30-35 percent) meat cattle raising is ensured with the following level of intensiveness: output of calves per 100 cows and noncalving young cows--no less than 80 head; the live weight of one young animal when weaned at 6-8 months of age should be 180-200 kilograms; and when it is sold at 15-18 months of age it should weigh 400-500 kilograms. The average daily gain of live weight in all sex and age groups should be 650-700 grams, including during fattening--no less than 900 grams.

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CSO: 1824/518

KIRGHIZ FOOD PROGRAM, AGRICULTURAL TASKS SET FORTH

Moscow NEDELYA in Russian No 27, 5-11 Jul 82 p 2

/Interview with A.D. Duysheyev, chairman of the Council of Ministers of the Kirghiz SSR by special correspondent of NEDELYA A. Yevseyev, Frunze: "Our Chief Tasks"/

/Text/ The weather forecasters were not wrong: rain fell on Kirghizia on this particular day. It was the first rain over a span of two scorching hot months. The republic breathed easier inasmuch as the fields had already begun to burn up and even in the moutainous and comparatively cool zone the heat had affected the pastures.

"What are we to do? We still remain dependent upon the caprices of nature" stated Arstanbek Duysheyevich Dusheyev, glancing out the window at the beneficial rain pouring moisture onto the gardens and fields of Kirghizia, "We are dependent even though we are aware of how to extricate ourselves from this dependency: the fields must be irrigated and the pastures watered. Water is required. Large quantities of water. For the grain and corn. For the forage grasses and for the beets. For apples and apricots. For the sheep and cows. We in the republic can truly and reliably develop agricultural production in all of its branches -- in the grain economy, in livestock production and in the production of technical crops -- but based upon one requirement -- irrigation of the land. It pleases us that in the food program, adopted during the May (1982) Plenum of the party's Central Committee, special attention has been given to the development of irrigation farming.

"We have developed this type of farming rather well in Kirghizia: the overall area of irrigated land is 1 million hectares. But if this figure is compared against our potential (according to scientific estimates, we have 2.4 million hectares of land that is suitable for plowing and for which water is available), then it is considerably less than that which is needed for creating agriculture that will always guarantee high crop yields and high livestock productivity. Irrigation means stable feed. And there can be no livestock production without feed. Let the sun shine to the maximum degree and even in the absence of rain we will still be able to provide water for the fields. Agricultural work will proceed well in all areas. We carried out some computations: if it were possible to add to the existing million hectares of irrigated land the other two million plus hectares, then we would have a force at our disposal which would make it possible to double the production of all agricultural products."

/Question/ Yesterday I held a conversation with the director of a sovkhoz in the Chu River Valley. He mentioned that his sovkhoz drilled several wells and used underground water for saving the crops from a drought. I asked if the water bed was very deep. He replied in the negative, saying that it was no more than 50 meters beneath the surface. If this is true, Arstanbek Duysheyevich, then what prevents us from "bringing" such water to the surface on all valley farms in Kirghizia?"

/Answer/ Yes, in both the Chu and Talass river valleys and also in Oshskaya Oblast the ground water beds are not very deep. And the yield of the wells here is as follows: 40-50 liters of water per second and any land reclamation specialist is aware that in a "conversion for a field," this is sufficient for 40-50 hectares of irrigated land (the arithmetic here is quite simple: 1 liter of water per second is quite adequate for irrigating a hectare of land). And if modern irrigation equipment is employed on the field -- Fregat, Volzhanka or Kuban' units -- then the irrigation area can easily be increased threefold -- the machines are more productive and more economical than the traditional irrigation ditches.

If such is the case, why is it then that we do not make full use of this wealth of underground water? Because sub-surface pumps are required, pumps which are capable of raising the water to the surface. And very few such pumps are being produced. But I believe that today, with the party carrying out such a large-scale task as the country's food program, a task the solving of which involves the participation of practically all of the ministries and departments, industry will support us and organize the production of the agricultural equipment required by the republic. Moreover, we can rightfully state that we are already partially solving this problem. The collective at the Osh Pump Plant has vowed to produce 300 such units over and above the plan in the interest of satisfying the republic's requirements. The country's Gossnab is meeting us half-way and has allocated the materials required for producing the pumps and this means that they will become available to the rural areas in just a month or month and a half. Thus the problem is being solved in an efficient manner. Moreover, these pumps will be placed in operation immediately; we will use them for supplying water to those fields which suffered this year from the drought -- we will plant corn for fodder directly over the stubble and obtain a second crop in October.

/Question/ What irrigation work is planned for the republic in the future?

/Answer/ First of all, we will act in a thrifty manner and raise the efficiency of existing irrigation canals and systems. Indeed, today we are losing almost one half of the water. The reasons: great filtration of the canals, low level of organization for the irrigation work, which is being carried out mainly using manual and old fashioned methods. Thus, progressive irrigation methods should be employed more extensively and use made of sprinkling machines. During this five-year plan, we will employ one half billion rubles for irrigation and land reclamation work. An even greater amount of work is planned for the Twelfth Five-Year Plan.

/What place will Kirghizia occupy in the country's food program?/

/Answer/ In short, it will consist mainly of providing meat, chiefly mutton, milk and wool. As you are obviously aware, sheep raising is the leading trend in our agriculture. But our proportion in the all-union division of agricultural

labor has to do with grain? wheat, barley, corn. And vegetable and melon crops, fruit, berries and grapes. If we are discussing "progress" for the livestock producers over a 10 year period, then it appears as follows: the first year of the 11th five-year plan -- 118,000 tons of mutton, the last year of the 12th Five-Year Plan -- 232,000 tons. As you can see, this represents considerable progress. Serious effort is required and especially with regard to strengthening the feed base.

In our case, feed is of maximum importance: when we have feed we also have increases in our milk yields, weight increases in the livestock and in the overall flock of Kirghizia. When we lack feed, the overall labor performed by thousands and thousands of people can go for naught. This is why we have assigned outselves a most important task -- to progress from 2 million tons of feed units annually, which we now have at our disposal, to 3 million tons. This constitutes the chief guarantee for fulfilling the tasks presently confronting the livestock producers of Kirghizia.

/Question/ Which of the tasks assigned to the republic by the food program do you consider to be the most complicated?/

/Answer/ There are two such tasks. I have already mentioned one of them: to remove ourselves from dependence upon the weather. The other problem -- the accelerated development of sheep raising. We are directed to do this by a specially adopted decreee of the party and government concerning further improvements in this branch throughout the republic. The tasks are of large scale and complicated. Judge for yourself: over a period of six and a half decades our flock has increased by 7.5 million head and now numbers more than 10 million sheep. And now during a period of 10 years it must be increased by 2 million head. Certainly, the problem here is not just one of high figures, since other factors are involved as well: solutions must be found for an entire complex of complicated problems associated with providing feed for the livestock, developing aquicultural construction, establishing roads and livestock complexes and training personnel

Today the pastures of Kirghizia are overloaded -- the sheep density per 100 hectares is the highest in the country: 119 head! Thus, a greater requirement exists for the development of high-mountain regions, areas which are almost inaccessible and characterized by difficult climatic conditions. In short, our shepherds must raise themselves to new heights -- both literally and figuratively.

/Question/ What does it mean to "develop a mountain pasture?"

/Answer/ It involves a complex of diverse types of work. Electric power lines must be installed and new livestock facilities and housing for the shepherds erected. Feed production must be organized. Generally speaking, the same work and tasks which usually must be carried out are here supplemented by many other tasks. An entire series of problems arises -- both large and small. For example, the successful development of high-mountain livestock production requires the organization of so-called "pasture rotation": the pastures are divided into plots -- the sheep graze on some while the land on other plots is allowed to rest and the grass to grow. Indeed it is no secret that the principal scourge of our pastures is their non-systematic use: the animals destroy more plants with their feet than they consume. But in order to prevent this from happening, the pastures must be fenced.

/Question/ What is preventing you from doing this?

/Answer/ Capital investments and funds are required -- hundreds of kilometers of wire and concrete posts for the fencing. Indeed the area of each pasture plot should not be less than 100 hectares!

/Question/ It is known that before too long the system of agricultural control is to be reorganized. What is being done at the present time in this regard throughout the republic?

/Answer/ We are studying the experience of those regions of the country where the new system of control is already in operation -- RAPO /rayonnoye agropromyshlennoye ob"yedineniye; rayon agroindustrial association/. In particular, the Vil'yandi Agroindustrial Association in Estonia. Our specialists paid a visit there. Certainly, we will not copy this experience mechanically, since we have our own specific conditions -- a livestock producing mountainous republic -- but without a doubt we will employ many of the developments raised by our colleagues in the Baltic, Georgia and the Russian Federation. The Central Committee of the Communist Party of Kirghizia and the republic's Council of Ministers have already adopted an appropriate decree.

/Question/ There is still another question: what place will be occupied in the republic's food program by the private plots and orchard and gardening collectives? I am posing this question because I have visited an orchard cooperative. All with whom I spoke claimed that they have already forgotten when it was that they last purchased fruit at a market or store. Everything they use is their own. In addition to their own requirements, they also satisfy those of friends and acquaintances. Moreover, they also supply these products to the procurement specialists of consumer cooperation.

/Answer/ Both the private plots and subsidiary farms constitute a strong reserve for our purposes. This reserve for meat, eggs, vegetables, fruit and berries will certainly be employed extensively during the course of carrying out the food program. As yet, we have said very little concerning one great wealth of Kirghizia -- fruit. And indeed, each year we procure hundreds of thousands of tons of fruit! Moreover, one half of this figure is provided by the private sector. Thus, more efficient work must be carried out in this regard and we must work as requested by Comrade Leonid Il'ich Brezhnev who, as you know, during his report delivered before the May Plenum of the party's Central Committee placed special emphasis upon the work being performed by the private plots and orchard-gardening cooperatives. We are undertaking very energetic measures aimed at developing the private sector and raising its role in the production of agricultural products. If you have visited our kolkhoz markets, then your attention was not doubt drawn to the large quantities of meat, fruit and vegetables available there. All of this was furnished by the private sector. We have obligated the leaders of local soviet organs to monitor the procurements of feed for privately maintained livestock. We are even allocating a portion of the irrigated land to be used as pastures for the private livestock. It is obvious that all of these actions will produce results. But here mention should be made of the fact that we lose large quantities of fruit. Expecially early varieties of apples and stone-fruits. Dried out apricots fall to the ground, plums fall, apples fall. And everything rots and perishes. Moreover, this occurs to an equal degree on both private and public orchards.

/Question/ Why does it happen?

/Answer/ We simply are not in a position today to procure or sell all of the products which our fruit orchards are providing us with. We do not have the equipment nor sufficient storage space for this. What can be done? What is the solution? Once again the answers have been provided in the decisions handed down during the May Plenum of the party's Central Committee: our industry must develop as rapidly as possible the production of machines for processing the agricultural products. Moreover, these must be simple machines and suitable for use under the conditions found in the rural areas.

/Question/ Are you satisfied with the work being performed by the procurement and trade organizations?

/Answer/ Certainly not. We are disturbed over the fact that on the one hand we are doing everything possible to increase the production of goods, only to learn that there is not always a ready market for the cabbage, tomatoes and cucumbers being brought in from the fields to the stores owing to a lack of storage space. This is causing great losses. Thus valuable practical sense and importance are being attached to the documents adopted during the May Plenum of the party's Central Committee, particularly in view of the fact that they reflect a new and overall approach to solving the problems of agricultural production. That is, an approach wherein the entire economic chain of events associated with the production, storage, transporting and sale of products is being examined step by step in a thorough manner. During its May Plenum, the party analyzed thoroughly the reasons for the blunders by the procurement organizations. Mainly they had to do with the fact that the potential of the procurement specialists does not conform with the increasing potential of modern agricultural production. As you are aware, the plans call for methods for eliminating these disproportions. Equal importance is also being attached to the fact that a conversion is being completed over to accepting the agricultural products directly at the farms. And the shipments will be carried out using the transport vehicles fo the procurement organizations.

/Question/ What will be the initial steps taken by the republic in connection with implementation of the food program?

/Answer/ It is simultaneously difficult and easy for me to respond to this question: it is easy because everything that we are doing on a daily and hourly basis represents our contribution towards implementation of this remarkable program outlined by the party and it is difficult because I must enumerate dozens, hundreds and even thousands of possible measures to be undertaken for the purpose of implementing the program. Thus I will limit myself to stressing the main point: notwithstanding the complicated weather conditions, Kirghizia successfully fulfilled its plan for the first 6 months of this year. This is very important for us -- indeed the first fruits of the food program must be realized this year!

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CSO: 1824/471

OPERATIONS OF LATVIAN RAPO ANALYZED

Moscow LITERATURNAYA GAZETA in Russian 23 Jun 82 p 11

/Article by Georgiy Tselms, correspondent of LITERATURNAYA GAZETA in the Latvian SSR: "What Made Talsy Famous"/

/Text/ The ancient, 750-year old Latvian town of Talsy, which is located, to the pride of its residents, on seven hills, like Rome, has recently become known all over the country. The RAPO--rayon agroindustrial association--made Talsy famous. People travel miles and miles to see it in action. How can they not do this? Talsinskiy Rayon has been testing the path recommended by the May Plenum of the CPSU Central Committee for the seventh year.

Some do not fail to demonstrate their previously acquired skepticism. The hosts are not offended by this. They recognize their guests' right to doubt. In their lifetime people saw many innovations and reorganizations of all kinds, including such when the replacement of a sign on institution doors was passed off almost as a panacea for all troubles and misfortunes.

Others come, expecting to see a miracle and they are disappointed when they do not see it.

People bring hundreds of questions with them to Talsy. The first one is the following:

Why Should the RAPO Be Established?

Indeed, people lived without the RAPO and, seemingly, managed well without it. Suddenly, it was needed urgently. The answer is simple.

Agriculture now cannot do without specialization. Well, if specialization is inevitable, this means that cooperation is just as inevitable. Otherwise... we will specialize to absolute absurdity. For example, three independent departments fertilize land, reclamation specialists carry out liming, Agrokhim applies chemical fertilizers and peat plants, peat. Every department transports its share of fertilizers to the field at a time convenient for it. But the field has its own time. One thoughtful manager is needed.

In the course of specialization all rural areas were partitioned by departmental fences: the Administration of Interkolkhoz Construction, Agricultural Equipment Association, "Melioratsiya" /Reclamation/, Agrokhim, the mobile mechanized column of power systems, the mobile mechanized column for the mechanization of livestock barns and so forth. These are only service organizations. In addition there are plants, combines and production associations processing meat, milk, flax, mixed feed, fruits and vegetables...

One gets quickly used to the absurd and it no longer seems such. It does not seem strange that the main levers of high productivity of agricultural production, that is, chemicalization, reclamation, mechanization and electrification, seem to be incidental to this production and that service organizations designed for servicing, possessing funds, have dictated their terms for a long time.

Kolkhozes and sovkhozes do not fulfill the plan for meat and milk deliveries, while, at the same time, meat combines and milk plants are among the advanced enterprises, receiving banners and profits. Those that process products have profits and those that produce them have losses. Is this fair?

Thus, does this mean down with specialization and back to subsistence farming?

No, long live specialization and forward to the RAPO.

The concept of the RAPO is simple: To unite producers of products, their processors and all the organizations servicing rural areas by common economic interest; in other words, to establish a macrokolkhoz the size of a rayon, but with maximum independence (this is very important!) for all its members.

This is again based on three very simple ideas.

First, all those that are involved in one way or another in the production of grain, milk and meat (be it rural builders, reclamation specialists or repair workers of the Agricultural Equipment Association) should be economically interested in large amounts of inexpensive grain, milk and meat and together with kolkhozes and sovkhozes, in the final result of labor, which was stated by L. I. Brezhnev at the May Plenum of the CPSU Central Committee and noted in the food program.

Second, service and processing enterprises entirely servicing a rayon should be subordinated to rayon organizations.

Third, the interests of each individual worker, the interests of managers and organizations and the interests of the RAPO and the state should coincide fully.

How Should the RAPO Be Established?

In the beginning there was the word. The scientists of the Institute of Economics of Latvia's Academy of Sciences under the guidance of Corresponding Member A. Kalnyn'sh developed a scheme of the agroindustrial association and suggested that the people of Talsy conduct an experiment.

Why was this rayon chosen? Because the conditions ideally corresponded to the experiment. Central control communications existed among farms, there was a full set of service and processing enterprises in the rayon and creative people headed them.

Before beginning the experiment, the people of Talsy familiarized themselves with the experience in cooperation and specialization in Belorussia and Moldavia and then at a scientific and practical conference, discussing the experience of others, arrived at the following conclusion: The model of A. Kalnyn'sh suits them most of all.

Cooperation proceeded in stages. At first only an agricultural association, that is, kolkhozes and sovkhozes, was established. Then alcohol-starch and mixed feed plants, the Administration of Interkolkhoz Construction and reclamation specialists gradually joined it exclusively on their own initiative. The agricultural association turned into an agroindustrial association.

Unified RAPO funds, that is, the development fund, the material incentive fund and the fund for social and cultural measures were immediately established from deductions from the profit. On strong farms with better objective conditions the "coefficient of deduction" is bigger (for example, on the Kolkhoz imeni Lenin, 2 percent) and on weak, low-capacity farms, smaller (on the Tingere Kolkhoz, 0.3 percent). The elected council and its board decide how much to deduct from every farm, how to spend the funds and hundreds of other matters of joint life and the staff, which, incidentally, is maintained with the money of member farms, not of the state, daily matters.

When the Talsy RAPO confidently stood on its feet, this model was also tested in three different rayons in the republic, then in eight and, finally, in all the rest.

Thus, the main principle of introduction--gradual and voluntary nature--is fulfilled. Not to hasten with a break, not to permit bureaucratic administration, not to coerce, but to persuade. Incidentally, the main goal of the RAPO, that is, to replace administrative methods of management with economic methods, lies in this.

What Can the RAPO Do?

This is what the participants in the Talsy and Valmiyera RAPO said:

I. Brauer, chairman of the Kolkhoz imeni Lenin:

"The RAPO represents intensification of specialization and cooperation and the most harmonious development of the entire rayon. I will explain, using the following example. Our kolkhoz is diversified, but in the RAPO we specialize only in seed breeding. With the association's help we built a modern grain center. We reproduce elite seeds, clean, treat and process them with laser beams and give them to other members of the association directly for seeders. Previously, everyone prepared seeds for itself and elite seeds deteriorated rapidly.

"There is a great deal of trouble with seeds and the RAPO council took this into consideration. It established a higher interfarm price for them. Previously, losses in one sector were covered by profits in another sector. This is not correct. '...The price, profit and credit,' Leonid Il'ich Brezhnev noted at the May Plenum of the Central Committee of the party, 'lose the role of economic levers and do not stimulate production growth.'

"The RAPO is legally entitled to give back to the price its function.

"The council decides who should grow seeds and who should fatten young bulls. At the same time, long-standing predilections, possibilities and experience are taken into consideration."

E. Valtyn', chief economist of the Kurzeme Kolkhoz, who has less equipment and fewer people per 100 hectares of agricultural land than others:

"If there had been no association, we would not have been able to build anything. We have now built a house with 57 apartments and 8 one-apartment houses, as well as 2 sections for 300 and 500 head. We will also build them for 1,000 head.

"We have bad conditions for livestock fattening. Previously, we hardly fattened a bull up to the weight of 300 kg, delivering it. Is this a weight? Now we breed young stock and transfer it to the Virbiy Sovkhoz for fattening. The sovkhoz pays us 2 rubles per kg. Previously, the state paid us only 1 ruble 20 kopecks. The sovkhoz does not do this for the sake of philanthropy--fattening is profitable for it. There is an alcohol plant on its territory. Free waste is used as feed."

V. Mein'sh, chief of the specialized mobile mechanized column of the Latspetssel'-montazh Trust (Valmiyera):

"At first, when we joined the RAPO, we had many doubts. Don't we have enough of our own chiefs? Why should we look for new ones?

"But now we see that we did not miscalculate. We know the perspective--where to build and what--for many years ahead. The RAPO has an efficient long-term plan.

"It has become easier to work on weak farms. If the proper conditions are not created, we go to the RAPO board. There is somewhere to seek justice and help."

V. Kleynberg, chairman of the RAPO board:

"Previously, everyone and no one managed. Some had some funds, others had other funds and still others (for example, rayon agricultural administrations) had no funds at all. Now there is a sole master--the RAPO council and board.

"The following is important: Specialists make the decisions.

"The rates of managers depend on the sale volume and income. Since the staff is maintained with the money of members farms, it is accountable primarily to them, that is, reporting and responsibility are not only from bottom to top, but also from top to bottom.

"The RAPO strengthens interfarm and interdepartmental connections and establishes a single technological production line: field-plant-counter-consumer. We can develop ourselves the lagging links."

K. Rutenberg, first secretary of the Talsinskiy Rayon Party Committee:

"The establishment of the RAPO is not merely a routine reorganization. This is a higher, new stage in the Leninist cooperative plan.

"We would like to note primarily the democratization of management. Everything is solved jointly. With such an approach subjectivism is ruled out completely. Previously, it used to be that one chairman went to the rayon committee: 'Help us with equipment.' Another chairman went with the same request to the rayon executive committee and the third, to the ministry. The one that had the bigger 'weight' obtained privileges for himself and, as a rule, at the expense of others. Such a thing is impossible now.

"The rayon party committee no longer distributes tractors. It has more important things to do; first of all, to foster in people and in managers a state approach to work, responsibility and initiative.

"I remember the first meetings of the RAPO council. Every one cared only for his own farm. Now people are more and more aware of common interest."

Thus, what did the RAPO do specifically?

Graduates of agricultural vuzes--the first students that received scholarships from the RAPO--returned to Talsy. They were assigned to lagging farms, which were unable to train specialists for themselves.

All the rayon's milk vans are now subordinate to the milk plant. A single central control service is in charge of transportation. If there is a jam somewhere, it is always possible to move transport facilities there and to help.

A single training-course combine was organized. Previosuly, almost every enterprise had to establish its own courses. Training was done according to self-made haphazard programs.

An artificial insemination enterprise--one for all--was established in Talsinskiy Rayon. A mechanization and electrification enterprise is being established. There is a decision to organize enterprises for the application of fertilizers and the production of building materials.

The Valmiyera Sovkhoz (Valmiyera RAPO) with the help of the Institute of Chemistry of Timber of the Latvian SSR Academy of Sciences is building on credit an experimental shop for peat hydrolyzate. The product (protein substance) will be shipped to all the rayon farms. The debt will be repaid jointly.

A kindergarten, a secondary school, a polyclinic and a restaurant were built in the settlement of Valdemarpils with the joint funds of the Tsinya Kolkhoz, the Tingere Kolkhoz, the Dubezere Sovkhoz and the mobile mechanized column No 1 of Energostroy.

As we see, the RAPO can do a great deal.

"However, only one-tenth of its capabilities are now utilized," says V. Kleynberg, chairman of the Talsy board.

What can the RAPO not do?

It cannot (does not have the right to) transfer funds from kolkhoz allocations to sovkhozes. They are appropriated "at the top" separately.

Once a livestock complex costing 3 million rubles was to be built on one of the sovkhozes. Kolkhozes also needed this complex--they would obtain heifers from it. However, kolkhozes did not have the right to share their allocations for construction. To shift all the cares to sovkhozes would mean to leave them without any allocations for construction. Thus, despite the optimum scheme, the complex had to be built on a kolkhoz.

One cannot utilize at one's discretion capital investments to which all service and processing enterprises are entitled. They are allocated purposefully--it is decided "at the top" what should be built and where.

The RAPO does not plan the volume of production of the final product for farms. What does this mean? This means that, instead of the plan, for example, for starch, the RAPO is forced to give farms a plan for industrial potatoes--how many should be sown and delivered. The entire existing planning system requires precisely this.

As a result, farms are concerned more with the volume of potato production than with the quality of potatoes. If there were starch in the plan, good tubers would be delivered and bad ones would be left for livestock.

Nor can the RAPO independently determine what projects should be included in the plan of reclamation specialists and builders. The latter would be glad to listen, but superior instances can transfer them elsewhere at any moment.

Their ministries also prohibited them from participating in the formation of centralized funds.

Meat and dairy enterprises are in the same situation.

The fundamental solution of these and many other RAPO problems is inherent in the decisions of the May Plenum of the Central Committee of the party. In particular, the following is stated: "Not to permit petty tutelage of kolkhozes and sovkhozes" and "to make the transition to the planning of the activity of the agroindustrial complex and to its management as a single whole at all levels."

The establishment of republic commissions for the coordination of activity and for the elimination of departmental barriers is contemplated. As conceived previously, a republic agroindustrial association will operate in Latvia.

An answer to tens and hundreds of specific questions must be found now.

What, for example, should be considered the final result? It would seem, simply the following: The bigger the harvest obtained, the more money the shareholders--RAPO members--will obtain at the end of the year. If the harvest is not successful, everyone will incur equal losses.

However, will this be fair?

Let us assume that all equipment operated as a clock. It did not break down before its time and did not cause any trouble. But the performance of kolkhoz machine operators was disappointing. Or conversely. Despite all the endless breakdowns and failures of equipment, grain growers, as we like to write, "won the battle for the harvest."

There should be common concern and personal responsibi'ity.

In Talsy people think and count the variants.

"It is possible to introduce the indicator of 'reliability of operation' for the Agricultural Equipment Association," says V. Kleynberg. "If a tractor operates without breakdowns for the prescribed period and cultivates its norm of hectares, the Agricultural Equipment Association will receive a guaranteed wage increase."

"But if there is nothing from which to pay for this 'increase'?' I spoke as an opponent. "After all, the harvest is not the derivative of equipment alone."

"This means that it is necessary to stimulate good intermediary results."

"Is this not a departure from the basic idea?"

"Of course, not. We have in mind intermediary results, on which the final result fully depends. For example, in Rostock in the GDR we learned how incentives are provided for an organization engaged in the application of fertilizers. If sprouts are good, it receives a 10-percent wage increase. Then it depends on the harvest. If land is bountiful, it receives another 10 percent."

"Nevertheless," I don't give up, "what if some RAPO members honestly fulfill all their obligations to the association and others let it down and the 'final result' is meager?"

"The RAPO council exists for this. It will always restore justice, beginning with the redistribution of common funds in favor of conscientious partners and ending with the replacement of those that went bankrupt."

Is the RAPO Advantageous for Everyone?

The supporters of the association maintain: for everyone.

I will venture to disagree.

The RAPO represents primarily an increase in responsibility for the final result. If one works well, one receives more. This is seemingly healthy. If one works poorly, one receives little. This is not healthy at all. Moreover, this lets down everyone. One's diligence and ability are now evaluated not by two or three rayon managers, or distant ministerial authorities, but by colleagues and partners vitally interested in one's diligence. The artel morality is as follows: The idler will be badly off. Previously, every once in a while it was possible to deceive the authorities about this. This trick will not work among one's artel members.

Therefore, the RAPO is not advantageous for all, but only for those that are able to work well, are inclined toward enterprise and are ready to bear the burden of responsibility. Is this not the best recommendation for the new undertaking?

Today the RAPO still has many opponents. This is normal. If everyone were immediately "for," such unanimity would smack of indifference. This is a hundred times more dangerous for the new undertaking.

The following is from a conversation with the director of one milk combine:

"Are you thinking of joining the RAPO?"

"We have not yet thought about this. If we are told to, we will."

Such a person is more dangerous for the RAPO than any opponent. So are those that expect an immediate miracle and are ready--how many times!--to believe in some immediate panacea.

No matter how sound the new scheme of organization and management may be, it will not abolish ordinary concerns. Cows will not be fed by the scheme. As before, it is necessary to cart fertilizers to fields, to sow good seeds, to store feed and to mechanize farms.

Simply, the RAPO makes it possible to do this better.

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CSO: 1824/483

EXPLANATION OF NEW FRUIT, VEGETABLE DECREE

Moscow SEL'SKAYA ZHIZN' in Russian 28 Aug 82 p 2

[Unattributed report: "Our Replies to Readers' Questions"; for report on joint party-government decree of 5 August 1982 "On Supplementary Measures for Expanding the Sale of Fruit and Vegetable Production by Kolkhozes, Sovkhozes and Other Agricultural Enterprises to Consumer Cooperative Organizations and in the Kolkhoz Markets" see JPRS 81743, No 1349 of this series, pp 114-115]

> [Text] The Editorial Board has been receiving letters asking us to explain the procedure for recording in the state procurement plan those vegetables, melons, fruits and berries sold by kolkhozes, sovkhozes and other agricultural enterpises to consumer cooperative organizations and in the kolkhoz markets.

We have consulted the respective departments for an explanation. They reported to us that, according to the decree of the CPSU Central Committee and USSR Council of Ministers of 5 August 1982 "On Supplementary Measures for Expanding the Sale of Fruit and Vegetable Production by Kolkhozes, Sovkhozes and Other Agricultural Enterprises to Consumer Cooperative Organizations and in the Kolkhoz Markets," the following procedure is being set up for recording production in fulfillment of the state procurement plan.

Output sold by kolkhozes, sovkhozes and other agricultural enterprises to consumer cooperative organizations and in kolkhoz markets up to 10 percent of planned procurement of vegetables, melons, fruits and berries (except table grapes, onions and garlic), measured against sales to the state (for each category of output), as well as output not accepted by procurement organizations and above-plan output of these crops sold by kolkhozes, sovkhozes and other agricultural enterprises to consumer cooperative organizations and in kolkhoz markets, are to be counted toward procurement plan fulfillment by kolkhozes, sovkhozes and other agricultural enterprises on the basis of commodity-transport invoice SF No 1-SKh (vegetables) certified with the stamps of the consumer cooperative or management of the kolkhoz market.

Kolkhozes, sovkhozes and other agricultural enterprises will present to state statistical organs within the specified time a record (certificate) of the sale of the products sold in conformity with the system fixed by the decree of

the CPSU Central Committee and the USSR Council of Ministers of 5 August 1982, indicating the quantity of the products and the total receipts for this output. A copy of the commodity-transport invoice will be enclosed with the list.

State statistical organs will credit kolkhozes, sovkhozes and other agricultural enterprises for fulfillment of the plan for sale to the state of products sold under this system to consumer cooperatives and in kolkhoz markets.

CSO: 1824/539

TILLING AND CROPPING TECHNOLOGY

EFFECTIVENESS OF AGROCHEMICAL SERVICE DISCUSSED

Moscow EKONOMIKA SEL'SKOGO KHOZYAYSTVA in Russian No 7, Jul 82 pp 35-42

[Article by V. Nikonov, USSR deputy minister of agriculture: "The Agrochemical Service and the Economy of the Farms"]

[Excerpts] In the Accountability Report of the CPSU Central Committee presented at the 26th Party Congress by General Secretary of the CPSU Central Committee Comrade L. I. Brezhnev, it was noted that intensification of the economy and its increased efficiency, if this formula is translated into practical actions, consists primarily in making sure that the results of production increase more rapidly than expenditures on it do so that, while enlisting significantly resources in production, it is possible to achieve more (See Materialy XXVI s"yezda KPSS [Materials of the 26th CPSU Congress], Moscow, 1981, p 40.)

This point pertains quite directly to the practical implementation of the tasks set for the country's specialized agrochemical service, and requires of all its subdivisions hard and purposive work for ensuring a maximum return from each ruble spent on the application of means of chemization on the kolkhozes and sovkhozes. Each year in the country as a whole these expenditures amount to billions of rubles just for acquiring mineral fertilizers and other chemical means, not counting the significant volumes of capital investments that are used for developing and strengthening the material and technical base which is necessary for their application. But it should be noted that, despite the significant expenditures, chemization produces a great economic effect which the kolkhozes and sovkhozes are obtaining even today as a result of increased productivity of agricultural crops and improved quality of crop growing products in the process of their procurement and storage.

At the present time chemization accounts for no less than 50 percent of the overall sum of factors that affect the increased yields, that is, the agrochemical service is one of the most powerful means of intensification of agricultural production which make it possible to actively influence its economy. This is demonstrated by the results of the Tenth Five-Year Plan which show that in agriculture as a whole the application of means of chemization annually provide for obtaining 16 billion rubles in additional profit, and each ruble spent on the application of mineral fertilizers is recouped with an additional yield in the amount of 2 rubles 40 kopecks.

As for the effectiveness of the application of fertilizers to individual agricultural crops, quite varied results have been obtained here. In 1976-1980 the relatively greatest additional yield was obtained from applying fertilizers to grain crops and cotton. On an average for the country 1 kilogram of nutritive substance applied to these crops was returned with 4.9 kilograms of grain and 2.7 kilograms of raw cotton with the normatives being 4.4 and 3.4 kilograms, respectively, and the net income from the application of fertilizers to grain crops reached 10.3 rubles (per one hectare) and for cotton--410.83 rubles. The greatest return from the yield of grain was found when fertilizers were applied in the Kazakh, Estonian, Ukrainian and Uzbek union republics and also oblasts and krays of the Central Chernozem, Northern Caucasian and Ural economic regions of the RSFSR. The application of fertilizers to cotton produced repayment in yields that was close to the normative in the Azberbaijan, Tajik and Kazakh union republics.

Still, in the country as a whole the application of mineral fertilizers is not effective enough when they are applied to sugar beets, potatoes, long-fibered flax and vegetable crops and also to grain crops in oblasts of the nonchernozem zone, the Far East of the RSFSR, and the Latvian, Armenian and Turkmen union republics.

In a number of republics and oblasts one of the main reasons for the poor effectiveness of mineral fertilizers is the fact that acid soils are still widespread. During the years of the Tenth Five-Year Plan the area of acid soils practically did not decrease and at the present time they occupy more than 60 million hectares of agricultural land. The most unfavorable situation exists in the Russian Federation, especially in oblasts of the nonchernozem zone where the proportion of acid soils is 70-80 percent of the overall area of agricultural lands.

The acidity of the soils is decreasing extremely slowly in the Volga-Vyatka, Central Chernozem and Western Siberian economic regions, and in a number of regions of the country the area of acid soils is tending to increase. Thus during ten years (1971-1981) their area in the Mordovian SSR increased by 16 percent, in the Udmurtskaya and Sverlovskaya oblasts--by 3.7 percent, and in Tul'skaya and Gor'kovskaya oblasts--by 3.5 and 2.5 percent, respectively. The existing situation was brought about mainly by the low rates of work for liming acid soils and the application of inadequate doses of lime materials.

In order to lime all acid soils under the current five-year plan, the annual volumes of this work in the country as a whole should be doubled as compared to the level achieved, increasing it to 13 million hectares, including up to 9 million hectares on farms of the RSFSR. There are also certain difficulties in providing the necessary quantity of lime materials for the work of chemical amelioration of the soil.

To solve these problems the Soyuzsel'khozkhimiya association is taking measures to increase the volumes and improve the quality of work for liming acid soils and performing this work strictly in keeping with planning estimates that have been developed. To these ends the association is expanding the extraction of local lime materials and organizing the utilization of various industrial wastes such as defecation mud and shale ash as means of soil amelioration.

At the present time reducing the acidity of the soil and reducing the areas of acid soils constitute one of the most important reserves for increasing the effectiveness of mineral fertilizers and increasing the productivity of agricultural crops on the kolkhozes and sovkhozes. According to data of scientific research institutions, the liming of acid soils provides for increasing the effectiveness of mineral fertilizers by an average of 25-30 percent, and every ruble spent on this work brings the farms more than 2 rubles in net income. Each year Sel'khozhimiya associations lime more than 6 million hectares of acid soil.

One can see how great these reserves are from the experience of the Kolkhoz imeni Razumovskiy in Chkalovskiy Rayon in Gor'kovskaya Oblast, where as the result of regular and high-quality liming in conjunction with efficient application of fertilizers and other means of chemization, the productivity of grain crops under the Tenth Five-Year Plan as compared to the Eighth increased from 27.4 to 40.7 quintals per hectare, corn for green mass--from 313 to 561 quintals per hectare and perennial grasses for hay--from 33.9 to 53.3 quintals per hectare.

The solution to the problem of increasing the productivity of agricultural crops presupposes not only effective, but also more intensive application of all means of chemization and requires significant capital investments in industry, transportation and agriculture. This makes it necessary to search for new, more efficient ways of organization and technologies for the application of fertilizers, the utilization of concentrated, more effective forms of fertilizers such as liquid ammonium and liquid compound fertilizers. Liquid ammonium is a relatively new nitrogen fertlizers in our country which contains 82.3 percent effective substance and is characterized by its relatively low cost. Its application makes it possible to avoid all manual labor in all stages of the technological cycle related to transportation, storage, preparation and application of these fertilizers to the soil, provides for uniform distribution of nitrogen throughout the fertilized area and makes it possible to reduce losses of it to a minimum.

In ordinary years liquid ammonium in terms of its agronomical effectiveness, that is, its influence on the harvest, is equal to equivalent doses of ammonium nitrate, and in dry years its effectiveness of considerably greater. As for the economic effectiveness, its application contributes to reducing expenditures by 34 and 30 percent as compared to ammonium nitrate and ammonia water, respectively.

Domestic and foreign practice shows that the application of liquid ammonium in optimal doses provides for an additional grain yield of up to 5-14 quintals per hectare, and an increase in the productivity of potatoes of 35 percent, sugar beets--25 percent and corn for green mass--45 percent, with a simultaneous increase in the crude protein content of 3.5-5 percent. There is also a positive effect from utilizing liquid ammonium on rice farms where its application provides for an average additional rice yield of 15 quintals from each hectare of planted area.

The Soyuzsel'khozkhimiya association is taking measures for extensive utilization of liquid ammonium in animal husbandry as well for processing straw and other coarse feeds. As a result of this treatment the straw is disinfected, its nitrogen content increases, and its nutritive value and digestibility also increase. In 1979 500,000 tons of straw were treated with liquid ammonium, in 1980--1,908,000 tons,

and in 1981 the volume of this work exceeded 2 million tons. This method of improving the quality of coarse feeds is practiced especially extensively in Kostromskaya, Smolenskaya, Tul'skaya, Vinnitskaya, L'vovskaya and Gomel'skaya oblasts, and also in Krasnodarskiy Kray.

Liquid ammonium is also used for processing peat, as a result of which its fertilizing properties improve essentially. In 1981 the volumes of work for ammoniazation of peat increased almost 1.5-fold as compared to 1980 and reached 500,000 tons.

Taking into account the great effectiveness of liquid ammonium the Soyuzsel'khozkhimiya association is taking measures to significantly increase its volumes and expand the zones of its application (Table 2). In 1980, that is, a year after the creation of the specialized agrochemical service, the utilization of this fertilizer in the country's agriculture increased 1.4-fold as compared to 1979, and by 1985 its application will have increased 7-fold as compared to 1979 and will amount to 1.2 million tons. At the present time liquid ammonium is extensively utilized on kolkhozes and sovkhozes of the Belorussian and the Ukrainian SSR's, the RSFSR, and also several other union republics.

Table 2. Volumes of Application of Liquid Ammonium in USSR Agriculture, thousands of tons

	1975	1976	1977	1978	1979	1980	1981
USSR	50.1	64.7	85.2	120.0	175.4	258.0	334.1
RSFSR	24.4	28.9	47.5	57.1	85.5	126.5	164.1
Ukrainian SSR	16.3	19.2	24.2	36.5	48.7	71.1	94.7
Belorussian SSR	5.3	10.6	7.0	17.0	26.0	46.0	59.6
Latvian SSR	2.3	5.6	6.0	5.7	9.4	10.4	6.5
Lithuanian SSR	1.8	0.4	0.5	4.4	4.5	5.1	5.0
Kirghiz SSR	---	---	---	0.3	1.3	1.9	2.0
Moldavian SSR	---	---	---	---	---	1.0	2.2

In recent years agriculture has begun to apply compound liquid fertilizer--ammonium polyphosphate, which contains 10 percent nitrogen and 34 percent phosphorus. The advantages of this over solid forms of mineral fertilizers are the same as those of liquid ammonium, and consist in the possibility of complete mechanization of the processes of its application, complete elimination of losses of nutritive substances and good uniformity of the application of the fertilizers to the soil.

Numerous research projects conducted in various soil and climate zones of the country show that the application of compound liquid fertilizers provides for larger additional yields of all crops and contributes to greater economic effectiveness than is obtained with the same doses of solid fertilizers (Table 3).

On the farms of Krasnodarskiy Kray the application of compound liquid fertilizers made it possible to reduce the volumes of capital investments as compared to solid forms of fertilizers by 28.5 percent per one ton, and operational and labor expenditures--by 24.7 and 56.2 percent, respectively.

Table 3. Economic Effectiveness of Compound Liquid Fertilizers (ZhKU) of the Brand 10-34-0 (according to data of the Central Experimental Design-Technological Laboratory for the Application of Liquid Ammonium and Other Liquid Fertilizers in Agriculture)

	Additional yield, quintals per hectare	Net income, rubles per hectare	Return on 1 ruble spent, rubles
	Corn (green mass)		
Superphosphate	50	21.0	1.87
ZhKU	65	35.0	2.45
	Winter wheat		
Superphosphate	3.0	12.9	1.49
ZhKU	4.2	33.6	2.60
	Potatoes		
Superphosphate	15	188.9	4.58
ZhKU	55	383.9	7.13

During the past 15 years (1966-1981) there has been a fairly steady increase in the production of organic fertilizers in the country, which made it possible to double their application by 1980 and increase it to 3.2 tons per one hectare of arable land (Table 4). On an average for 1976-1980 the kolkhozes and sovkhozes of the country annually applied more than 800 million tons of organic fertilizers to the soil.

Table 4. Application of Organic Fertilizers, tons per 1 hectare of arable land

	1965	1970	1975	1980
USSR	1.7	2.2	3.3	3.6
RSFSR	1.3	1.7	2.6	2.9
Ukrainian SSR	3.5	4.5	6.5	7.0
Belorussian SSR	7.0	7.6	11.4	13.7
Latvian SSR	4.4	7.4	10.8	10.8

The utilization of this quantity of organic fertilizers, if their quality is sufficiently high, makes it possible to provide up to 50 percent of the nutritive substances applied to the soil with mineral fertilizers. Certain union republics (the Belorussian, Estonian and Latvian SSR's) have now reached the level of application of organic fertilizers which practically provides the conditions necessary for maintaining an adequate balance of humus and changing over to expanded reproduction of soil fertility.

In other union republics, where the volumes of application of organic fertilizers are considerably less, increasing their production is one of the main tasks of the kolkhozes, sovkhozes and Sel'khozkhimiya associations, and it requires from them

maximum utilization of all existing local resources such as peat, straw, sapropel, household wastes and other sources.

At the present time Sel'khozkhimiya associations provide for approximately 45 percent of the shipments and more than 34 percent of the application of organic fertilizers, and the share of the specialized agrochemical service in the overall volume of this work in the country is constantly increasing. By 1985 it will provide for the shipment and application of fertilizers mainly through its own forces.

But despite the measures that are being taken, the problem of the quality of organic fertilizers and the place and time of their application remains as critical as before. This problem is brought about by the poor provision of the kolkhozes and sovkhozes with manure storage facilities (about 18 percent of the need), the lack of the necessary quantity of peat for preparing composts, and also the inadequate supply of agriculture with special technical equipment for preparing and applying organic fertilizers, which leads to violations of the technology for procuring them. The result of all this a considerable proliferation of weeds on the fields, increased cost of work involved in destroying them, and a shortage in the harvest of agricultural crops.

Violations of the recommended time periods for applying organic fertilizers also have a negative influence on their effectiveness. Despite the fact that the summer and autumn are considered to be the optimal times for applying them, the farms apply most of the organic fertilizers in the spring. This leads to excessive packing and drying of the soil, prolongation of field work, and low return for this work in the harvest.

The need to improve the utilization of fertilizers and other chemical means have made it necessary for the Sel'khozkhimiya associations to search for new, more effective forms of agrochemical service for the kolkhozes and sovkhozes. One of these forms is comprehensive chemization of the fields, which is called agrochemical "capital repair" of the fields. Its introduction, which began in 1980 in a number of oblasts of the RSFSR, is based on increasing the results of agrochemical measures through comprehensive application of them on fallow fields or fields from which early crops have been harvested, and its goal is to provide for an earmarked level of soil fertility on specific sections and to obtain the planned productivity of agricultural crops for the next 5-7 years.

The work for comprehensive chemization of the fields is performed by Sel'khozkhimiya associations on the basis of contracts concluded with the farms. The contracts stipulate that the fields are to be given the proper "capital repair" for an established period of time by Sel'khozkhimiya associations, which are responsible for conducting the entire complex of agrochemical work in keeping with the developed planning estimates. At the end of the work the farms are given a certificate which guarantees that they will obtain the earmarked productivity of agricultural crops on the basis of the new and higher level of soil fertility throughout all the stages of the crop rotation. The contract also stipulates that the farms are responsible for observing the established agrotechnical requirements that are necessary for ensuring the planned yield--the quality of seed material, the system for cultivating the soil, the time periods and quality of the field work that is done, and so forth.

At the present time comprehensive chemization of the fields has been most developed in the Tatar ASSR, Ul'yanovskaya, Rostovskaya, Volgogradskaya and Lipetskaya oblasts, and also in Stavropol'skiy and Altayskiy krays. The results of experiments conducted in Lipetskaya Oblast show that conducting "capital repair" for the fields makes it possible to increase the productivity of winter grain crops by 6.9-11.4 quintals per hectare.

In 1981 in the RSFSR as a whole Sel'khozkhimiya associations performed work for comprehensive chemization of the fields on an area of 1.03 million hectares, and this year the volume of this work is to be increased to 1.4 million hectares. Moreover, on an area of 600,000 hectares this work is to be done by the farms themselves. Taking into account the great effectiveness of the organization of the work for comprehensive chemization of the fields, the Soyuzsel'khozkhimiya association is taking measures for extensive introduction of this promising form of agrochemical service for the kolkhozes and sovkhozes in other union republics as well.

One of the most important areas in the activity of the agrochemical service which exerts an essential influence on the economies of the kolkhozes and sovkhozes is protection of the agricultural crops from pests, diseases and weeds. Thus protective measures make it possible to obtain annually an additional 18-19 million tons of grain, 13-14 million tons of sugar beets, more than 10 million tons of potatoes and vegetables, about 5 million tons of fruits and grapes and 1.6-1.8 million tons of raw cotton. In the country as a whole under the Tenth Five-Year Plan as compared to the Eighth, the value of the crop that was preserved increased 1.5-fold, and each ruble spent on pesticides was recouped with 59.2 rubles' worth of crop growing products that were obtained as a result of their application.

In recent years in agricultural practice there has been extensive application of comprehensive (integrated) systems of protecting the crop, which envision a combination of chemical, biological, agrotechnical and other measures and provide for good results with simultaneous savings on labor and material-technical resources. Comprehensive systems of measures for protecting the crop are introduced on areas planted in grain spike crops, rice, corn, potatoes, sugar beets, oil-bearing crops, pulse crops, melon crops and industrial crops. At the present time they are being introduced on an area of more than 50 million hectares in our country, and by the end of the Eleventh Five-Year Plan the volumes of their introduction will reach 120 million hectares.

A comprehensive system for protecting the crop has become considerably widespread on the areas planted in cotton on the Tajik SSR where before its introduction, despite 10-12-repetition all-over chemical treatment with aviation, the extermination of the pests did not exceed 60 percent, which led to large losses of the crop. Moreover, intensive application of pesticides has a negative effect on the useful insects and led to pollution of the environment.

With the introduction of the aforementioned system of protecting cotton, the republic changed over from all-over and repeated treatments of the planted areas with insecticides to selective treatments using ground equipment.

They began to conduct the treatments only on the basis of the results of investigation of the planted areas, taking into account the number of useful and harmful species, in combination with extensive application of agrotechnical measures: "combing" the rootstalks of perennial weeds, removing diseased and damaged plants, chopping the plants during the period of mass egg laying of the boll weevils, and planting with strains that are resistant to pests and diseases.

From 1978 through 1980 the volumes of the introduction of the comprehensive system of the protection of cotton in the Tajik SSR increased from 180,000 to 700,000 hectares, and the number of times the areas planted in this crop were treated with toxic chemicals decreased during this period to one-third of the former level.

The introduction of comprehensive systems of protecting the crop is marked by great effectiveness on the farms of Krasnodarskiy Kray. As a result of improving the quality of investigatory work, the utilization of progressive technologies and expansion of the volumes of application of biological methods of plant protection, the expenditure of pesticides on the kolkhozes and sovkhozes of this kray have decreased by 50 percent and in 1980 amounted to 4 kilograms per hectare. A great deal of attention is devoted to planning protective measures, taking into account the economic threshholds of damage. This approach made it possible just through conducting measures to fight against cabbage worm during the years of its development to reduce the volumes of chemical treatments by 60 percent and to save from 450,000 to 600,000 rubles a year. On the farms of Krasnodarskiy Kray as a whole, the introduction of comprehensive systems prevents losses of the crop amounting to almost 230 million rubles and provides for obtaining a net income in the amount of more than 500 rubles per hectare.

Questions for improving technologies for the application of pesticides occupy an important place in the organization of the work for plant protection, particularly the introduction of small-volume and ultrasmall-volume sprinkling into agricultural production, which provides for significant savings on pesticides and reduced pollution of the environment with them.

Ultrasmall-volume sprinkling is marked by especially great economic effectiveness. When this is done during treatment of the planted areas with aircraft against pentatomid grain borers and locusts, and also to destroy weeds, as compared to small-volume sprinkling it provides for a reduction of the expenditure of liquid from 55 to 4 liters per one hectare, increased productivity of the aircraft during sprinkling from 65 to 130 hectares per hour, and a reduction of expenditures on preparations and their application from 14.6 to 9.5 rubles per hectare.

During the past three years (1979-1981) the application of ultrasmall-volume sprinkling of the planted areas increased more than 10-fold and in 1981 it reached 2 million hectares. The conventional economic effect from its introduction during this period increased from 938,000 rubles in 1979 to 10.2 million rubles in 1981.

In recent years in a number of krays and oblasts such a progressive device for utilizing fertilizers as joint application of them with mineral fertilizers on areas planted in grain crops has worked well. In the RSFSR combined application of 2.4-D amine salt herbicide with urea or ammonium nitrate, as compared to individual application of them, led to a reduction of expenditures on treating the planted

areas, contributed to a certain increase in the productivity of grain crops, and increased the technical effectiveness of the herbicide by 10-13 percent.

One of the most effective methods of utilizing all chemical means, including means of plant protection, is to apply them to agricultural crops that are being cultivated according to industrial technology. Thus on the Kolkhoz imeni Lenin in Matveyevo-Kurganskiy Rayon in Rostovskaya Oblast in the very dry year of 1981 on an area of 500 hectares the productivity of corn for grain that was cultivated according to industrial technology was 20 quintals greater than with ordinary technology and amounted to 38.4 quintals per hectare. On the Rossiya Kolkhoz in Krasnoarmeyskiy Rayon in Krasnodarskiy Kray the treatment of the areas planted in corn cultivated according to industrial technology with the herbicide Eradikan provided for an additional productivity of 18 quintals per hectare, and the entire planted area produced an additional 25,000 rubles' worth of grain while the expenditures on the treatment of the planted area amounted to 4,200 rubles.

The advanced practice of a number of farms of the country shows that one of the conitions for great effectiveness of protective measures is efficiently organized work for treating seed material of grain crops. At the present time this work is well arranged on the farms of the Belorussian, Muldavian, Kazakh, Kirghiz, Latvian and several other union republics. The experience of the Latvian SSR is instructive in this respect. There the main direction in the organization of the treatment of seed material has been to construct large interfarm treatment points.

One of these points where a technologist and a worker work was constructed on the Kolkhoz imeni Lenin in Talskiskiy Rayon. The shift output of the complex is 120 tons of seeds, and the economic effect from this organization on the farm amounted to 106,500 rubles, and the expenditures on its construction were recouped in 1.5 years. The republic is also constructing mechanized treatment points that serve one farm. Their design feature is the small volume of the bunkers for storing seeds.

The experience of the Azerbaijan SSR is also worthy of attention. Here the work for treating the seeds of grain crops is done by Sel'khozkhimiya associations along with the farms. The farms of the Azerbaijan SSR are equipped with disinfectors of various kinds, including such highly productive ones as the PS-10, which make it possible to treat up to 10 percent of the seeds in one shift, and this amounts to 60-70 percent of the seed supply of grain crops of a typical farm in the republic.

Beginning in 1980 the republic began to treat the seeds of grain crops both directly on the farms and in centralized places, at specially organized points of the Sel'khozkhimiya associations that are presently equipped with more than 50 PS-10 and PST-3 disinfectors. Even in the first year of the introduction of this organization of the treatment of seeds the output per disinfector in the Sel'khozkhimiya associations increased two-fold as compared to the farms, and the main thing was that the quality of the treatment of the planting material improved considerably.

In 1981 in the Azerbaijan SSR 12,000 tons of seeds were treated centrally, and by 1985 most of this work in the republic will be done by the Sel'khozkhimiya association.

The Basic Directions for the Economic and Social Development of the USSR During 1981-1985 and the Period up to 1990 set for agricultural agencies, kolkhozes and sovkhozes the task of increasing the production and improving the quality of all kinds of feeds and providing for a sharp reduction of losses of their nutritive value during harvesting and storage. The necessity of carrying out this task was dictated by the need for a radical improvement in feed production, on which the solution to the country's food problem largely depends, and this requires that the agrochemical service extensively introduce on the kolkhozes and sovkhozes progressive technologies for procuring feeds, utilizing chemical means, and that it provide operational control over their quality.

Chemical preservation has become a promising and well recommended means of procuring feeds. It makes it possible to preserve almost all of the initial qualities of the procured feeds and reduce losses during storage to a minimum.

According to domestic and foreign research, the utilization of chemical preservatives when preparing silage makes it possible to preserve 30-40 feed units, 5-8 kilograms of protein, 15-25 grams of carotin and 10-15 kilograms of sugar in each ton, or up to 95 percent of the initial content in the feed.

When chemical preservatives are used the nutritive contents of the silage increases by 8-12 percent and its digestibility--by 15-20 percent.

The great effectiveness of chemical preservatives is also shown by the results of mass production experiments conducted in the Estonian SSR, which show that, as a result of the increased nutritional value of the silage procured with chemical preservatives, the expenditures on obtaining one kilogram of conventional milk (milk plus weight gain) decreased from 0.9-1.0 to 0.7-0.9 feed units, that is, by an average of 15 percent as compared to the utilization of ordinary silage. Positive experience in chemical preservation of feeds has also been accumulated in the Latvian, Lithuanian, Ukrainian and Belorussian union republics and in a number of oblasts and krays of the RSFSR.

During the past three years (1979-1981) the application of chemical preservatives in our country increased 1.6-fold and in 1981 amounted to 23,800 tons, and the volumes of procurements of silage and haylage using these substances increased from 2.9 to 4.7 million tons during this period.

The level of organization of control over the quality of feeds on the kolkhozes and sovkhozes exerts an essential influence on the state of affairs in feed production. At the present time this work is being done by 197 oblast (kray) design and research stations for the chemization of agriculture and agrochemical laboratories. They do approximately 70 percent of all the research. Moreover, the quality of feeds is determined by about 5,000 kolkhoz and sovkhoz laboratories, and also veterinary service laboratories.

The experience of many farms of Krasnodarskiy Kray and Sverlovskaya, Omskaya and a number of other oblasts in the country shows that a promising direction in the organization of the system of control is to combine the present design and research stations for chemization and agricultural laboratories with a sufficiently dense

network of rayon and especially farm express laboratories. Thus in Omskaya Oblast, on the initiative and with the participation of the design and research station for chemization, in 1978 many farms organized express laboratories for control over the technology of the preparation of grass meal, grass cuttings and briquette and granulated feeds.

As their work experience showed, the organization of these laboratories contributed to a marked improvement in the quality of the feeds that were procured and also to a significant economic effect. On an average for the oblast, a year after the creation of the laboratories, the sales price of one ton of grass meal increased from 90 to 102.6 rubles because of the improvement in its quality. In Mar'yanovskiy Rayon in Omskaya Oblast, where express laboratories were organized on all the farms, the additional profit from the sale of high-quality grass meal in the second year of their existence amounted to 64,500 rubles, which considerably exceeds the expenditures on the organization of the laboratories.

This article has touched on individual problems of the agrochemical service for agriculture, although they are the most important ones. The solution to these exerts a significant influence on the indicators of the production activity of the kolkhozes and sovkhozes as well as on their economy. The main task of the workers of this specialized service in the country is to reach a point where the productivity of agricultural crops and the monetary incomes of the farms not only increase each year, but become more stable. By doing this these workers will make a worthy contribution to the implementation of the food program.

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Sept. 23, 1982